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Would you EXCEL?
Push on where others falter,
Cold **Reason** for your guide,
Success your altar.

Would you be LOVED?
Forget self and ambition
And strive to better make
Your fellowman's condition!

—G. H. C.

JOSEPH MAC DONALD, JR., M. D.
1870-1922

The American Journal of
CLINICAL MEDICINE
Dependable Therapeutic Fact for Daily Use

Vol. 29, No. 3 March, 1922

Dr. Joseph MacDonald, Jr.+

ON SATURDAY, January 7th, there passed from this life one of the outstanding personalities in medical journalism, Dr. J. MacDonald, Jr., for 17 years Editor and Publisher of *The American Journal of Surgery,* New York City.

Dr. Joseph MacDonald was born in Branchville, Sussex Co., N. J., on Nov. 12th, 1870, as the son of the late Mr. and Mrs. Joseph MacDonald. A few years later, the family moved to Newark, N. J., where Dr. MacDonald received his education in the public schools.

Early in life, he displayed a fondness for literary work and one of his chief objects in taking a medical course was, to become proficient as a writer on medical subjects.

On April 19th, 1904, he graduated from the Baltimore Medical College, being valedictorian of his class. He and Chauncey M. Depew furnished the commencement oratory on that memorable evening.

After his graduation from the Baltimore Medical College, he returned to New Jersey and continued his duties as Managing Editor of the *International Journal of Surgery,* of New York. In 1905, he founded the *American Journal of Surgery.*

Besides his duties on this publication, the doctor was Secretary and Treasurer of the American Medical Editors' Association, which office he held for twenty years. He was one of the most prolific writers of the Association and, in that capacity, he rendered unusual and valuable service to the United States Government.

He worked assiduously and with a true devotion to extend the influence of the American Medical Editors' Association. Indeed, his labors have contributed most to its upbuilding, and it is to him largely that belongs the credit for the splendid growth and work of the Association, in making it a powerful organization in American medical journalism. This work will stand as a monument to his fidelity and administrative ability.

Dr. MacDonald served as a member of the East Orange Board of Education, from January 1910 to February 1912, rendering at that time distinguished public service as the representative of the people in East Orange.

The doctor was commissioned in 1913 as a First Lieutenant in the Medical Reserve Corps,

U. S. A. Having a fondness for military work, he attended a number of Camps of Instruction for medical officers, notably at Tobyhanna, Pa., and took the special course for medical officers provided at Ft. Leavenworth, Kans. In March, 1917, at the organization of the United States Army Medical Examining Board of New Jersey, he was appointed Adjutant of the Board and, on April 10th, was commissioned a Captain. On Dec. 10th, 1917, he was commissioned a Major in the Medical Corps, U. S. A., and, in April 1918, was appointed, by Surgeon General Gorgas, as President of the Army Medical Examining Board of New Jersey. Between June 1917 and November of that year, he covered 3,200 miles in the State of New Jersey in the interest of the Examining Board, which meant many trips, considering that New Jersey is only about 180 miles long and less than 100 miles wide.

Over 1,100 members of the medical profession of New Jersey were physically and mentally examined by this Board and over 1,000 were recommended for commissions in the Medical Corps, U. S. A. In June, 1918, Major MacDonald was appointed, by Secretary of War Baker, a member of the General Medical Board at Washington.

Dr. MacDonald's activities in the interest of the Army Medical Corps have not alone been confined to his work in New Jersey. As Secretary and Treasurer of the American Medical Editors' Association, he prepared two special editorials a month for over 100 of the leading medical journals throughout the United States, setting forth the needs of the medical department of the United States Army. This work he carried on from June 1917 until the signing of the armistice.

Upon Dr. MacDonald's honorable discharge from the army, he was highly commended by the Surgeon General, who expressed his personal appreciation of the splendid spirit manifested in giving such faithful service and valuable assistance to the army.

Dr. MacDonald's many friends felt that, in his serving the Nation in its hour of stress so faithfully and well, he had honored his colleagues, especially those who had been associated with him in medical journalism.

In January 1915, in partnership with Dr. S. C. Martin of St. Louis, Mo., Dr. MacDonald founded and published *The Medical Pickwick*, a monthly magazine of wit and wisdom for the medical profession.

Early in life, Dr. MacDonald became a member of the Masonic Craft by initiation into Kittatinny Lodge of Branchville. He subsequently became a Companion of Orange Chapter, Royal Arch Masons and of Kane Council, Royal and Select Masters of New Jersey.

He became a Knight Templar in Jersey Commandery, East Orange in 1902, and a Mystic Shriner in Mecca Temple, in New York. He gave much of his time and attention to Templar Masonry and, in 1907, was elected Eminent Commander of Jersey Commandery.

In May 1917, he was elected Right Eminent Grand Commander, Knights Templar of the State of New Jersey, the highest and most exalted position of Templarism in the State.

It was mainly through his strong individual efforts that the object of organized charity in Jersey Commandery was brought about, and this charity work has been a feature of Jersey Commandery ever since.

Dr. MacDonald organized the Red Cross Corps of Jersey Commandery in 1907, which brought the Commandery fame, not only in its Grand Jurisdiction, but in foreign jurisdictions as well.

The doctor was a firm, just and lovable character, with his heart in whatever he undertook. He was always ready and willing to help everyone and no effort was too great for him, where he could give assistance, counsel and advice. He was forcible and decisive, yet tender and intensely sympathetic.

Dr. MacDonald was known in virtually every part of the United States, where he had numerous friends who loved him for his sterling qualities and high principles. He was also widely known as a true sportsman, as he had hunted and fished in every State where fish and game abound. He had a large preserve in Northern New Jersey that was well stocked with the finest of birds.

On May 3rd, 1919, the doctor was stricken with a severe cerebral hemorrhage, at which time little hope was held out for his recovery. However, with wonderful medical attention and Dr. MacDonald's own will power and determination and stick-to-itiveness, with which he was endowed, he rapidly improved and his almost complete recovery was a mystery to his friends.

Although he seemed to be in excellent physical condition, happy and having much to live for, he was again stricken on Jan. 7th, 1922 and within an hour passed into The Great Beyond to receive his just reward.

He is survived by a wife and one sister, Mrs. W. C. McKeeby, the wife of Dr. McKeeby, of Syracuse, N. Y.

Friendship, once assumed, entails certain obligations. —Anne C. E. Allinson, The Atlantic, 1921.

THE SULPHOCARBOLATES

Over twenty years ago, when the sulphocarbolates of calcium, sodium and zinc were introduced, the present writer was engaged in general practice and used these remedies, either singly or in combination, a great deal. Before then, he had been called upon every year to treat numerous cases of typhoid fever. After he had commenced to administer the sulphocarbolates — more especially in febrile conditions associated with intestinal unrest and which presented some of the prodromal symptoms of enteric fever, his cases of well-defined typhoid became less numerous.

We do not believe that the lessened morbidity can be attributed entirely to improved sanitary conditions in that particular locality. It was a country district and very few changes were made with regard to sewage, well-water supply, and so forth; and these only in each given case when it had been ordered specifically.

We expressed the opinion then, and we still adhere to it, that the early and persistent administration of the sulphocarbolates stood in relation to the fact that cases of this kind that (we had every right to believe on clinical grounds) would have developed into typhoid fever were actually jugulated; in short, the intestinal antiseptics (in this particular point, the sulphocarbolates), proved to be efficient remedies.

In later years, after having given up general practice, our personal opportunities for administering and for observing the action of these interesting drugs were curtailed considerably. However, we had occasional opportunity to employ them and did so always with marked satisfaction to ourselves and to our patients. Through communication with other physicians, also, we have received frequent information as to the merits possessed by these remedies.

It would be interesting to know just what are the experiences of our subscribers in general practice with the sulphocarbolates. In fact, we want to know this very much. We therefore invite our subscribers, those of them who actually prescribe these particular antiseptics, to communicate to us their clinical experiences. We should like to have more than just impressions or indefinite conclusions. If it is possible to give case histories, we would be in a position to draw our inferences more clearly.

AMERICA'S DUTY?

According to *Current Opinion* (Jan.) Mr. H. G. Wells, who "covered" the Washington Conference, regards America as today "the predominant state in the world" and he appeals to us to "assume not only the dignity but the responsibilities of leadership." He writes:

"I will not believe that the American spirit, distilled from all the best of Europe, will tolerate this surrender of the future, this quite hoggish abandonment of the leadership of mankind that continuing isolation implies. The American people has grown great unawares; it still does not realize its immense predominance now in wealth, in strength, in hope, happiness and unbroken courage among the children of men. The cream of all the white races did not come to this continent to reap and sow and eat and waste, smoke in its shirt-sleeves in a rocking-chair, and let the great world from which its fathers came go hang. It did not come here for sluggish ease. It came here for liberty and to make the new beginning of a greater civilization upon our globe. The years of America's growth and training are coming to an end, the phase of world action has begun."

We are wondering just now how this British view of our duty towards our neighbors strikes American citizens. Much has been said about Washington's warning against foreign entanglements. The idea of maintaining a proud and self-satisfied isolation; of keeping out of European and international disputes, appeals to many. Such a course *might* save trouble; but, would it actually do so? We don't know. We are not in politics, and we have only our own personal ideas about the subject.

Physicians are good citizens. They are distinctly workers and producers; also, they are voters. As such, they should formulate definite ideas concerning not only internal, national affairs but also with regard to the relations of our country to other nations.

SLIPSHOD METHODS IN SURGICAL DIAGNOSIS

A general practitioner, after having observed a certain surgeon in his consultation room for about an hour, remarked with a feeling of envy that, after all, the surgeons

have it easy, as virtually all they need for their diagnostic armamentarium is, a well-developed set of finger tips; the x-ray being the shining exception.

The surgeon, apparently thus flattered, blushingly admitted that he always carries his diagnostic laboratory—gloved. He did not even mean it as an *omnia mea mecum porto.* He was too modest for that.

Now, this is not a story woven out of fancy but an actual occurrence in a town boasting of three well-equipped hospitals, which the present writer happened to be visiting, some time ago. This occurrence only mirrors certain preconceived notions, not only on the part of internists, but on that of surgeons as well, and, accordingly, it furnishes an interesting text for a serious sermon.

If the reader will recall one or more cases in which some reputable surgeon was called in consultation and was actually expected to make a diagnosis by merely "laying hands on the patient," we shall not be accused of exaggeration.

The fault is to be laid at the door of the entire medical profession. The surgeon who has confidence that his *tactus eruditus* is so well developed as to require little else for a correct diagnosis is, to say the least, a charlatan; and the practitioners, who content themselves with the "findings" of a consultant whose sole armamentarium consists of his bare hands, are blind to the best interests of their patients.

Human finger tips are seldom capable of unveiling the character of deep-seated pathologic processes and an apparently plain case may be so misleading, as far as its diagnostic aspect is concerned, that a conscientious surgeon will never undertake to issue a pronunciamento until he has exhausted all known diagnostic measures. Even then, the first therapeutic incision may humiliate the wonderful (?) *tactus eruditus* and yield the palm to the most important diagnostic agent—the surgeon's eyes! The methodical examination of patients in all except emergency cases, in which the diagnostic refinements must be sacrificed to prevent delay of life-saving therapy, is of prime importance in surgical as in clinical cases. *Primum diagnosis!*

On a previous occasion, we have in this department expressed our lack of enthusiasm for the socalled standardization of diagnostic methods. Yet, while we still are of the opinion that medical science cannot be harnessed to please the fancy of certain efficiency-expert "reformers," we do not desire to be understood that we reject any and all systems and methods; for, that would be tantamount to scientific anarchy. On the contrary, we have ourselves practiced a certain routine for years, and, while we do not always follow the straight path, and make excursions whenever something unusually attractive lures us into side-paths or even untrodden paths, we have a decided objective in view which we never lose sight of, and that objective is, *to know what is the matter with the patient we hope to treat.*

We record his name, address, age, occupation, social condition, not because we hope to secure "clews" to our search, but because we want to know something of the human being we are treating. In this spirit, we let him tell us in his own way what the trouble is. Not that he knows or can enlighten us to any great extent, but, again, because we want to know something of the individual as an individual. Indeed, often, the entire interrogatory which one can purchase on printed diagnostic blanks, so cleverly gotten up by those who recommend standardization, is not worth the paper it is printed on, for the simple reason that human beings cannot be standardized. What are we going to do with the sullen, mentally defective, untruthful clients who either give us no information at all or such that cannot be relied upon? The hysterical, exaggerating insignificant phenomena would hamper us in our objective study, if we were influenced by their psyche, and the unconscious patient suffering from a brain lesion will prove a poor guide if we follow his hand pressing to one or the other side of the head.

First and most important in our effort to learn something of the problem confronting us is—vision. The ability to see well (in the surgical sense, of course), is far more of an art, far more difficult, albeit far more productive, than the *tactus eruditus.*

Young surgeons must learn to SEE their patients, and that means, not only to note the facial expression, but to study the entire body, noting every deviation from the normal. It is only when the eye can no longer see that the *tactus eruditus* comes into its own, but not to replace inspection. Palpation supplements inspection and, naturally, has its legitimate field in deep-seated pathology.

Palpation, too, is an art which must be acquired, for, as one teacher has aptly put it,

the less one presses in palpation, the more one feels.

Now, if it were possible to classify all diseases into clinical and surgical affections from the very beginning, our sermon could end right here. But, as a matter of fact, neither the internist nor the surgeon nor any physician, and often not even several of them combined, can come to a satisfactory conclusion, even after a preliminary examination; and not infrequently the entire armamentarium of the modern clinical laboratories must be brought into action before the evidence can even be weighed for a final decision. The mere fact that a patient has sought the services of a surgeon does not by any means mean that his trouble is surgical, and the surgeon must be prepared to exhaust all diagnostic resources before deciding on the necessity of operative therapy.

Take for purpose of illustration the case of a patient seeking a surgeon's advice for an articular effusion which developed "spontaneously"; that is to say, the patient in his history remembers no trauma and certainly knows of no cause. The patient can be assumed to be sincere in his statements. Of course, the surgeon will question him with regard to previous diseases and endeavor to obtain a good history of the effusion with special reference to its beginning, development and so on. Often, this may lead to a diagnosis; but, more often, the serologic laboratory and the microscope will have to be depended on for illumination. The trouble may be gonococcal, rheumatic, tuberculous, syphilitic in character, it may be but a metastatic trouble of distant origin or, finally, the surgeon may be confronting a deforming affection.

Likewise, in doubtful disease of the kidney, the procedure of exhaustive uranalysis must be augmented by cystoscopy, catheterization of the ureters, function tests and what not to clear up the diagnosis. In all suspected diseases of the gastrointestinal tract, test-breakfast and test-meal, fluoroscopy and radiographs, examination of the feces and blood counts may require days of labor and patience before the surgeon will decide whether he has legitimate cause for resorting to the knife.

We have hinted enough to make out a case. The idea, that the finger tips are endowed with prophetic powers capable of unveiling the mysteries of the human economy, is as reliable as the vaporings and swindles of card readers, coffee ground readers, star-gazers, *et id genus omne.* The fingers have no place in modern scientific medicine except in their proper role as one of the least important diagnostic appliances, which must be used intelligently and in conjunction with other scientific means to prove of scientific value. Rapid-fire diagnoses based on slipshod methods are worse than charlatanry!

Who does the best his circumstance allows, does well, acts nobly; angels could do no more.—Young.

THE OPPORTUNITIES OF THE GENERAL PRACTITIONER FOR THE INVESTIGATION OF DISEASE AND THE PROGRESS OF MEDICINE*

Sir James Mackenzie, the noted British cardiologist, is perhaps the only real dignitary of the medical profession who is always ready to acknowledge the importance of the general practitioner in the domain of medicine. In his public utterings and in his writings, he never fails to put in a good word for this neglected member of the medical profession and no one can deny that, for the good of the practitioner, as well as for the progress of medicine, his beneficial influence is inestimable.

The very method of handling his discussion of this subject is proof that he sincerely believes in his assumption that, in the future advance and progress of medicine, the general practitioner is destined to play the chief role as he has done so heretofore, up to the time when the era of extreme specialization made its advance.

Specialism, Dr. Mackenzie believes, means limited experience which leads to a limited outlook upon matters medical. Laboratory methods, the fad of modern time, have their own limitations, though they are none the less important for the advance of medicine.

He points out that successful medical research was always preceded by instructive clinical observation, but this fact has been lost sight of lately and there never was a greater fallacy committed than to disregard the part that the clinical observer should play in attaining the chief aim of medicine; namely, the prevention of disease.

If one can not recognize the early symptoms of disease, how can one recognize and know the circumstances that form or cause disease? And, what other man can see the early stages of disease if not the general practitioner? The

(Abstract of a thesis written by Sir James Mackenzie, and published in the *British Medical Journal*, June 4, 1921.)

specialist recognizes disease only after it has gone so far as to damage the organ; he never sees the early stages of the disease in which he specializes.

Mackenzie further points out that, as pathological bacteriological investigations have attained the dominant positions they hold today, the methods of the clinical observer fell to the background and, as an investigator, the clinician gradually disappeared. In consequence, many of the opportunities he had, to advance medicine, were not utilized. He proves his contention by a masterful discussion on prognosis, a knowledge of which he considers to be a most vital factor in the intelligent practice of medicine.

Of paramount importance to the patient as well as to the physician in charge is the question, what is going to be the result of the complaint that the patient presents. Is it dangerous to life, to a future state of health? How often have unnecessary operations been performed because the surgeon could not determine just what is the prognosis in the given case!

Or, let us take the question of vaccine therapy: A certain microbe is held responsible for producing certain disease. It is quite appropriate to combat the disease by a corresponding vaccine, but a question of prognosis also here arises. Is the patient likely to recover without treatment? If so, what of the treatment? If there is danger of death, wherein lies the danger? Thus we see that both, physician and surgeon, are greatly interested in the knowledge of prognosis, a knowledge which our forrunners have possessed in a greater measure than we do today.

This knowledge was personal and came as a reward through long and persistent training of their powers of observations.

The practitioners of the bygone days have perhaps not kept such careful records as we do nowadays, but it is Dr. Mackenzie's opinion that they are now kept merely as a routine, without true understanding of their importance. To his mind, the chief purpose of records is, to lay a basis for prognosis. But, this purpose is defeated in the fact that these records reflect detached facts superinscribed by specialists and add only more details to the enormous chaotic mass of them, already present, and thus confuse and darken the field of modern medicine.

In an article of this kind, one cannot enter into elucidating and commenting upon the argumentation that Dr. Mackenzie uses as justification for the views he holds.

To derive the full benefit of this thesis, the reader is referred to the original thesis.

The illustrations, that Sir James Mackenzie makes use of are drawn chiefly from his experiences as a cardiologist, but they are of equal value to any one in the medical profession, since the conclusions are based upon fundamental truths, that are applicable to the entire domain of medicine.

To study symptomatology, is the keynote of his thesis. To interpret the symptoms not from a narrow and limited point of view, that of a specialist. Therein lies the future and the potential good that the general practitioner can do.

The firefly only shines when on the wing; when once we rest, we darken.—Bailey.

THE CASE AGAINST FAIRY TALES

The proponents of matter-of-fact and strictly utilitarian education have long since united in condemning the fairy tales that used to delight our own hearts and sometimes would send delicious shivers of apprehension down our spinal columns. Jack never planted the bean (it is said with emphasis) and, if he did, it couldn't possibly produce a stalk long enough to reach to the moon; therefore, the whole story is an untruth and the child's mind should not be perverted with it. Such is the coldly calculated judgment of the ultra-modern educator.

Now comes Madame Montessori who expresses her disapproval of fairy tales clearly and positively (cf. *Current Opinion*, Jan.). The Germanic and Anglo-Saxon races, she says, adjust their mentalities to fairy tales somewhat differently from the children of the Latin races. The former attribute a mystical and even a religious quality to the fairy tale, whereas the Latin children regard the fairy tale not as symbols of some truth or other, but merely as a form of amusement. This difference arises, according to Madame Montessori, from the circumstances that, among the Latins, mothers do not tell their children fairy tales. Latin children hear such things only from the lips of their nurses or from servants of rustic origin. The teaching of fairy tales as a part of the course is not permitted in the schools of the Latin race.

The Anglo-Saxons would be wise if they followed the Latin practice in this matter, insists Madame Montessori. Listening to fairy tales is not a superficial practice that leaves

no mental effect behind. Indeed, the fairy tale has a profound psychical effect and enters deeply into the mental make-up of the growing child. In its early years, the child is engaged in the tremendous labor of self-organization and self-discipline at a period when its critical faculties are not yet formed. Then the child can not distinguish clearly between the real and the imaginary, between the possible and the impossible. Plunging the infant mind into the supernatural world merely prolongs the period of mental confusion, forcing the child to exist in a two-fold consciousness—in fact, to have two worlds on its hands.

Furthermore, the fairy tale and the legend develop a dread of reality, a terror of the actual and a tendency to introduce into all interpretations of life and events a mystical element, a "wonder" world which turns out to be all falsehood in the child consciousness when contact with reality is complete. The disillusion is too often a tremendous shock. In every Anglo-Saxon memory, there remains some such tale as that of the little one who, having heard there was no Santa Claus, lost all confidence in its mother. The mother had lied on this subject—the same mother who had always taught the child never to lie. In a word, the upshot of the Montessori propositions is, that the fairy tale is morbid, pathological and deadly.

Here we have it. The terrible charge has been made and the indictment is duly found, the fairy tale is a lie and, therefore, pernicious. However, in the educational system of the English-speaking peoples, cultivation of the imagination from the earliest infancy plays an important part. Indeed, adults in the Anglo-Saxon world would continue in their state of delight at the world of fancy and imagination, often in spite of themselves. This alliance of a practical realism pushed to the extreme with an imagination that tolerates no limit to its exercise does not seem to have injured the prospects of the Anglo-Saxon peoples throughout the world. Naturally, then, the Anglo-Saxons hesitate to take Madame Montessori quite seriously on this subject. There is the additional detail, overlooked by Madame Montessori, that the elements of the Anglo-Saxon world of wonder and romance are borrowed from many sources that are not Anglo-Saxon at all, but continental European, as the work of Shakespeare and other writers shows. To Professor Van Gennep, for instance, who discusses the Montessori criticism, it seems plain that Madame Montessori is in error because she lays stress upon the lack of "reality" in the fairy tale and in much folk lore, and overlooks the tendency of such things as a whole.

It seems to us that certain objectionable features of the fairy tale could easily be eliminated without depriving the child of much that is wholesome and stimulating to the child's mind. If fairy tales were explained to the child, if the dragon were identified with wrong acts, while the prince were shown to be the one observing truth and bravery and idealism, certain fairy tales would have great value. If it were explained to the child that the story of the sleeping princess, who is kissed awake by the prince, formerly had a religious significance, and that, primarily, it refers to the earth asleep in the icy grasp of winter and that is kissed to life by the sun prince, the youthful imagination would not be led into perverted devious meanderings, but would be keenly interested in many directions.

We do not think that it is necessary to follow out the idea. Everyone who is entrusted with the care of children can do that for himself and herself. Primarily, we do not believe that it is foolish or erroneous to stimulate the child's imagination. Indeed, we confess to still maintain a sincere liking for the fairy tales told so attractively by the Brothers Grimm and by Anderson. We also have maintained a cordial fondness for Robinson Crusoe, and, at times, "dip" into De Foe's delightful romance. If there were no fairy tales, if there were not poetry—perhaps, there would be no music, and a great many other beautiful things would be absent too. What a world!

One more thought, fairy tales for the youngsters take the place of novels and other recreational reading for the grownups. Supposing we were to eliminate fairy tales; then, in justice, we would have to eschew all but strictly technical reading. All our delightful authors would have to earn their living by cultivating the soil or making shoes, or other useful things. Under such a scheme of things, Mark Twain could never have made children (from four to eighty years young) happy. Again, we say: What a world!

A BOOK THAT SHOULD NOT HAVE BEEN WRITTEN

On page 235 of this issue of CLINICAL MEDICINE, there appears a review of "Timely Truths on Human Health", by Dr. Simon

Louis Katzoff, a book in which the medical profession is taken to task severely for holding, and acting upon, certain views concerning the causes, the treatment and the prevention of disease. The first part of the book deals largely with hygiene and diet, also with the best methods of living so as to avoid disease; the author discusses the causes and treatment of various of the bacterial diseases and defends the view that the specific, or etiologic, treatment of these affections, by means of vaccines and serums, and, also, their prevention by the same means is wrong, since "germs do not cause disease".

There are chapters on drug-addiction, on insanity, on surgical abuses, hospital abuses, medical ethics, and so forth. The first part of the book contains thirty-four chapters. The second part contains a "health symposium" for the discussion of the causation of disease by germs, of the vivisection problem, the vaccination problem, and the birth control problem. For each one of these later discussions, the author has secured contributions from other writers, both in the affirmative and in the negative of the questions under consideration. He himself functions merely as chairman of the meeting, summing up the arguments and offering his own conclusions which, incidentally, are in opposition to those commonly held.

If we devote an unusual amount of space to this production of Dr. Katzoff's, it is largely because of the circumstance that it is offered to the laity, presumably for its "education". The author claims to have investigated and discussed the various problems dispassionately and with the sincere desire to be helpful; to point out errors and abuses and to show the way for their correction and eradication. He declares that he has maintained an open and impartial mind and, probably, fancies himself in his role of reformer, seeing it his duty to castigate what he conceives to be evil and to call the entire sinning medical profession to repentance. It is a serious matter to assert that the over one hundred and fifty thousand medical practitioners in the United States, and all their many thousands of colleagues in Canada, in Latin-America, in Europe and, in short, all over the world, are enmeshed and persist in blamable, serious and, even, vicious errors; that they practice their art to the detriment of their charges and that they deliberately foster and propagate erroneous ideas and teachings.

We do not have the least desire to accuse the author of bad faith. We hasten to admit his evident honesty and sincerity of purpose; his straightforwardness and his well-meant attempt to point out evils, or what he conceives to be evils. That he appears to be constitutionally unable to differentiate between good and evil, in matters medical; that he cannot see the justness, the reasonableness, the wonderful marvels of the action of bacteria upon the human organism, of the resistance of that organism to the invading bacteria, of the reaction of the organism by the formation of antibodies and antibacterial substances—things that have aroused the astonished admiration of all students, ever since Metchnikoff published his fascinating studies on phagocytic action—must be attributed in all probability to insufficient training and not to the desire merely to pose as a critic. And, that is just the point which we wish to make. The author asserts that germs do not cause disease. He cites Virchow (among others) in support of his contention. He calls Virchow "the world's leading authority on this subject" and claims that he "was formerly a leading advocate of the germ theory". Virchow was not a leading authority in bacteriology, nor was he a leading advocate of the germ theory. If Dr. Katzoff will study Virchow's writings in the original, and not in the (mis)quotations of antivivisectionists, antivaccinationists and various other antis, he will find that Virchow was never particularly enthusiastic about bacteriology which was a new science at a time when he was already an old man. It is said that, after Koch's announcement of the bacillus of tuberculosis (1882), Virchow walked downstairs puzzled and shaking his head.

While Katzoff denies the germ theory of disease, he insists that spitting, coughing, sneezing and whistling ought to be performed privately and as sanitarily as possible—in a handkerchief (*which should later be burned*—italics are ours.—Ed.) We are accustomed to insist upon the burning of cloths and rags containing expectorations etc. for purposes of disinfection. If germs do not cause disease, why not simply wash the handkerchief? Dr. Katzoff has much to say about the inconsistency of "regulars" or (as he calls them, wrongly) "allopaths". The advice cited, for one is by no means consistent with his teachings.

If the book consisted of about the first one-hundred pages, it would not contain anything particularly new—indeed, there is not a new thought in the whole work—but, it would have

been a fairly acceptable guide on diet, hygiene, and so on, and which might have been given to laymen without fearing to lead them astray through faulty teachings. However, since the author has insisted upon adding more than two hundred pages of text upon subjects which he simply does not understand and which he can not have studied closely (at least, not in the bacteriological and the physiological laboratory), the result is rather serious if the book is intended for "lay consumption."

We have already said that there is nothing new in the book. It does contain some things that are very good. That fact, however, is more than overbalanced by the erroneous teaching that the author offers and which is bound to upset ignorant and unthinking people. We can not but be sorry that the book ever was written, and, having been written, found a publisher. With every possible goodwill toward the author, personally, we must hope, for the greater good of the greater number, that it will not find a ready sale.

Our criticism of Dr. Katzoff's book may be thought to be unduly severe. We can not admit that it is. For a physician to make statements, the incorrectness of which could easily be determined in the laboratory and, also, through clinical observation, is a serious offense against the dignity of the entire medical profession. It might even be called by a harsher name.

Generally, downright fact may be told in a plain way; and we want downright facts, at the present, more than anything else.—Ruskin.

STRAINING THE MEDICAL-ETHICS BRIDGE

It has apparently carried the required load so long and so well, this Code of Medical Ethics, that one hesitates to raise any question. It seems foolish, perhaps, to submit it to the acid test and, yet, it may be necessary. Just because the Code has worked so long, is rather the reason for the investigation. The standards of life and living differ today from those of the day when we accepted the Code as it is.

What prompts our consideration is the question raised by no less an authority than that expert in its field, *Printer's Ink*. This journal for advertisers asks "Is Medical Ethics Bending Backward?" Naturally, they assume that everybody should advertise or at least every class of people, whether mercantile or professional, and either by printer's ink or in *Printer's Ink*.

For self protection, we of the medical profession cannot let this question be answered, or answered exclusively by those who look on from the outside. It challenges thought and compels investigation. Does our code call for apology or for reaffirmation? Need we be on the defensive or is the time ripe for modifications?

Here is a vital subject for any medical society. What shall we do about it? What will you do?

Gross commercialism is cautioned against with the statement that "most products and most services, no matter how professional, must be sold." This is based on the platform that salesmanship enters into every phase of life whether that of a preacher or a politician, a department store or a doctor. Whether you are in practise for the love of it or for a living, the volume and character of your work will depend on your personal ability to sell yourself, your knowledge, your time, at a profit.

Time was when our biggest competition was with the patent-medicine people. They are with us (or against us) still; but, added to this, we have a growing class of advertisers including the Eddyites, New Thoughters, Chiropractors, naturopaths, and other drugless healers going to the sick public with loud notes of self-praise.

We look at all this with alarm, not as it affects us personally and us only, but as it frequently means a distinct loss to the public at large.

Medical Ethics has a platform that reaches on one side to unite all ethically inclined physicians. On the other hand, it reaches out to the entire list of sick and disabled on a basis of service.

It remains to ask whether you have enough faith in yourself and your profession to say what you can do to and for the physically incapacitated. Your card in the local paper is perfectly ethical, beautifully so. But, does it meet the situation?

This is to suggest that there is a possibility of coming clean on newspaper and other publicity for the profession at large. It will mean work by an advertising agency of a character that is inoffensive to anybody but constructively helpful to both, physicians and the sick public.

There is no suggestion here for individual advertising, but a collective publicity on such

subjects as "The Family Doctor" as an institution in American life that must not die. Also "American Surgery," probably with illustrations of a broken bone and the applied splint in opposition to the do-nothing treatment of some cults.

Incidents from the history of medicine are appealing and constructive. Numerous other subjects can be suggested to serve as texts for most readable advertising copy, every one of which will help both, the doctor and the public. Service rendered means value received and induces prompt, cheerful payment and satisfaction to both parties.

Our platform of Medical Ethics should be absolutely hole-proof, while making it possible for us of the medical profession to render an increasingly greater measure of service to a growing clientele. Take this up with your neighbor and have him do the same, and both of you introduce something into your local society, something that will get the notice of your county unit and, then, your state organization, and we shall have a new and improved basis of Medical Ethics that will meet the conditions of today.

If a cause be good, the most violent attack of its enemies will not injure it so much as an injudicious defence of it by its friends.—Colton.

THE COUNCIL OF PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION
And Scientific Research

On page 171 of this issue of CLINICAL MEDICINE, there will be found an article on "Butyn, A New Synthetic Local Anesthetic" which was reprinted from the *Journal of the American Medical Association*, for February 4. This article contains a special report of the Committee on Local Anesthesia of the Section on Ophthalmology of the American Medical Association. The investigations of this committee, which is made up of various prominent opthalmologists and otologists, were carried out at the request of the Council and their report is based upon numerous careful, detailed clinical observations.

We record the fact, that such an appreciative report was published in the *Journal of the American Medical Association*, with great pleasure. We appreciate even more highly the basic fact that the Council on Pharmacy and Chemistry was instrumental in bringing about the investigation mentioned and that it manifested a keen interest in the results of chemical research carried on by American chemists in the research laboratory of an American firm of manufacturing chemists.

In the matter of therapeutic research, also, the Council has stood for careful and exact observation and has stimulated numerous valuable investigations. All this work makes for greater exactness in the preparation of remedial agents employed and, no less, in the determination of the indications for their administration.

All this is entirely as it should be. While the Council on Pharmacy and Chemistry was primarily entrusted with cleaning house, with improving the deplorable conditions that existed twenty years ago in the drug market, it also has by implication not only the privilege but the duty to encourage pharmaceutical and chemical research and it is decidedly a part of its obligations to pass upon (through duly accredited agencies) the results of such experiments.

In CLINICAL MEDICINE for February (p. 85), there apepared an editorial dealing with the essential relations between the physician and American chemistry. It was shown that American chemists have produced and are producing numerous substances that are of very great value to the physician, that enable him to deal with disease conditions better than was possible formerly. It was pointed out that American chemists rank easily among the first in the world and that they, in fact, the whole American chemical industry, should receive every encouragement.

The fact that, in addition to its encouragement of therapeutic research, the Americar Medical Association has manifested in this recent action a constructive and beneficial interest in the work of American chemists is tc be commended highly. It is encouraging not only to the research chemists but also to physicians. We know that we can trust the Council to serve the best interests of the medical profession and, no less, of the patients. For, after all, it is the sick people whom physicians are serving and it is for the benefit of the sick people that physicians should be supplied with the best possible means.

We look forward to still greater acquirements and results from the work of our colleagues of the chemical faculty. We are following their work with keen interest and we are convinced that, in this particular, at least, we need not go beyond the confines of our own country and that we can safely leave the search for improved remedies for the treatment of disease conditions to our own research workers.

Leading Articles

Butyn, a New Synthetic Local Anesthetic: Report Concerning Its Clinical Use*

Special Report of the Committee on Local Anesthesia of the Section on Ophthalmology of the American Medical Association

By ALBERT E. BULSON, JR., M. D., Fort Wayne, Indiana

EDITORIAL COMMENT.—In connection with this important article, the reader is referred to an editorial article appearing on page 170 of this issue of CLINICAL MEDICINE.

To the Council on Pharmacy and Chemistry of the American Medical Association—Gentlemen:

AT your request, the committee secured some samples of butyn, a new local anesthetic, which the manufacturers, the Abbott Laboratories, provided, and submitted it to animal experimentation and clinical trial These experiments were begun several months ago by the individual members of the committee, and, up to the present time, seem to have been sufficiently extensive and conclusive to justify the report herewith submitted.

Though the committee was supplied with samples of powdered butyn, it was thought best to follow the suggestion of the manufacturers and experiment with a 2-percent solution and, later, under appropriate precautions, use solutions of great concentration. Accordingly, this report, except where otherwise noted, applies to results as obtained with the 2-percent solution.

In accordance with your suggestion, we recorded our observations as follows: anesthesia, including onset, depth, penetration and duration; side actions, including immediate and late irritation, changes in pupil diameter, vascularity, intra-ocular pressure, desiccation of cornea and other side actions; toxic systemic effects, and comparative value in ophthalmic work, including major as well as minor operations. Under these various headings our observations are as follows

Anesthesia

Repeated trials indicate a striking rapidity of anesthetic action, as shown by the fact that, one minute after one instillation of a 2-percent solution of butyn in the eye, surface anesthesia is sufficient to permit of touching the cornea or removing superficially placed foreign bodies without discomfort. This surface anesthesia lasts from fifteen to twenty minutes, when, in the average case, it begins to subside. Occasionally, the anesthesia has been noted for from twenty-five to thirty minutes. The depth of anesthesia produced by one instillation is not sufficient for operations, or for even the removal of deeply embedded foreign bodies in the cornea. It is, however, sufficient for the painless extraction of superficially placed foreign bodies, the application of irritating astringents, and the determination of intraocular pressure with the tonometer. When the number of instillations is increased, there is a marked increase in the depth, degree and duration of the anesthesia.

For operative work, the committee has followed the plan generally used when cocaine is the anesthetic employed, which consists in four instillations, three minutes apart, the operative work to be begun from five to ten minutes after the last instillation. This method resulted in the production of an anesthesia deep enough and complete enough for all of the commoner major operations on the eye, with the exception of enucleation, which up to the present time has not been performed

*Reprinted from *The Journal of the American Medical Association* for Feb. 4, 1922.

under butyn anesthesia by any member of the committee. The height of anesthesia appears to be secured at about five to eight minutes after the fourth instillation of the anesthetic, and its duration is from twenty to thirty minutes in the average case, though frequently lasting much longer, and in a few instances even the surgical anesthesia has lasted for nearly an hour.

Side Actions

One instillation of a 2-percent solution of butyn almost invariably produces a mild hyperemia of the conjunctiva. This hyperemia is not noticeably increased by subsequent instillations of the anesthetic. It is controlled readily by epinephrin solution, or may be averted by combining epinephrin with the butyn. When epinephrin is not employed, the hyperemia gradually disappears in from thirty to sixty minutes. The hyperemia seems to be more marked and of longer duration in diseased eyes, even though the active stage of disease has passed.

Butyn solutions do not affect the pupil diameter in any way, and produce no change in the intra-ocular pressure. There also is no desiccation or disturbance in the nutrition of the cornea, so far as has been determined. We also are of the opinion that butyn solutions do not deteriorate rapidly, even when exposed to air and light, nor is their anesthetic efficiency impaired by boiling.

Toxic Systemic Effects

In beginning the use of butyn, we were confronted with the statement of the Research Committee of your Council, to the effect that butyn is two and one-half times more toxic than cocaine when injected hypodermically into albino rats, and that the lethal dose of butyn, when injected intravenously into cats, is about equal to that of cocaine. One member of our committee, Dr. H. M. Langdon, in conjunction with Dr. Herbert Fox, director of Pepper Clinical Laboratory of the University of Pennsylvania, has conducted some animal experiments with a view to determining the toxicity of butyn, and the result of those experiments confirmed those of the Research Committee of your Council. The manufacturers state that their animal experiments substantiate these findings.

However, in no instance, including the hundreds of times that butyn has been used by the members of the committee for minor as well as major operations on the eye, as well as in operative work in the nose and throat, have the slightest systemic toxic manifestations been noted. Following the report, that surgeons and dentists had freely used butyn for surface and infiltrative anesthesia with no toxic results, some of the members of the committee have used butyn in paste and in concentrated solutions as a topical application for operative work in the nose as well as in the eye, and with no evidence of toxic effects. The committee, in comparing the effects on animals and men, is inclined to believe, as suggested by Professor Sollmann of your Research Committee, that there may be (1) differences in absorbability from mucous membranes; (2) different ratio of toxicity in man and animals, and (3) different frequency of idiosyncrasies. It is probable that, if butyn is used as extensively as cocaine, there will be cases of toxic effects reported, and then it is a question to decide whether the symptoms are due partly to psychic causes, to idiosyncrasy, or to error in using more of the drug than is required to produce the desired effect.

Comparative Value in Ophthalmic Work

In the use of butyn as a local anesthetic, cocaine is used as a comparison, and our committee is unanimous in the opinion that, for purely surface anesthesia for minor operations, butyn is superior to cocaine for the reason that it acts more quickly, fewer applications are required, there are no objectionable side actions, such as dilatation of the pupil or desiccation of the cornea, and the anesthesia is more profound. For producing surface anesthesia for the removal of foreign bodies from the eye, the application of irritating astringents, estimating the intra-ocular pressure with the tonometer, or for any of the minor operative procedures, butyn solutions seem to be very useful.

For major operations, particularly those requiring opening of the eyeball, such as iridectomy and cataract extraction, the technic usually employed in obtaining a cocaine anesthesia is employed in obtaining butyn anesthesia. The use of a 2-percent solution of butyn results in a more profound anesthesia than is obtained with a 4-percent solution of cocaine, and without any objectionable side actions. For operations on the extrinsic muscles of the eyeball the results are equal to those obtained with cocaine, though the committee believes that a solution stronger than 2-percent may be preferable.

Infiltration Anesthesia

In view of our understanding that butyn might prove quite toxic, we did not at first

use butyn for the production of infiltration anesthesia, and only recently have we undertaken some experimental work, using both 0.5 and 1-percent solutions for the purpose. While our experience is limited, up to the present time we have had very satisfactory results. A 0.5-percent solution of butyn has been injected rather freely into the tissues for the purpose of doing advancements of the extrinsic muscles of the eyeball, for the opening of abscesses in the orbit and the appendages, and as an adjunct in operations in which the eyeball is opened. In the few cases in which this has been tried, a deep and satisfactory anesthesia has been secured. A more comprehensive report covering infiltration anesthesia with butyn will be made later, and will form a part of the committee report to be presented before the Section on Ophthalmology of the American Medical Association.

Butyn in Nose and Throat Work

The chairman of the committee has used butyn solutions as a routine for several months in nose and throat work, and the results, in brief, are considered worthy of being a part of this report; as they bear directly on the question under consideration.

The recognition of the fact that the nasal mucous membrane possesses greater area and increased absorbing surface, as compared to the conjunctiva, made it advisable to begin with weak solutions and use smaller amounts until the toxicity in the average human being could be determined. Therefore, at first one application of butyn in 1-percent solution was made over small areas within the nose, and tests for anesthesia were made subsequently at intervals of from one to three minutes. These tests indicated a mild surface anesthesia produced within one minute. Later, these tests were extended to include surface anesthesia sufficient for everything pertaining to an examination, including the use of applicators and eustachian catheters, as also for the allaying of discomfort occasioned by the use of astringents or escharotics. Finally, butyn in 5-percent solution was employed as a routine in producing anesthesia for all of the major intranasal operations.

As butyn produces no ischemic effects, there is no shrinking of tissues following its use; hence the condition of the intranasal tissues remains approximately the same except for the anesthesia. This is a valuable feature in those cases in which a portion or all of a turbinate is to be removed. When combined with epinephrin, butyn in 5-percent solution produces an anesthesia sufficient for all of the major intranasal operations, including submucous resection of the septum, turbinotomies and intranasal operations on the accessory sinuses. Not only is the anesthesia very satisfactory, but, up to the present time, not the slightest toxic effects have been noted in the hundreds of operative cases in which the anesthetic has been used. Among these cases are thirty-eight consecutive submucous resections of the septum and twenty-six consecutive intranasal operations on the nasal accessory sinuses.

The technic employed in obtaining anesthesia has been similar to that employed in obtaining anesthesia from cocaine, except that the butyn has not been used in greater concentration than 5-percent solutions. The anesthesia lasts from thirty to forty minutes.

Exceptions

In comparing butyn anesthesia with cocaine anesthesia, the committee has discovered that occasionally a patient seems to be immune to complete local anesthesia from butyn employed in either 2 or 5-percent solution. These cases are relatively few. The failure to secure complete local anesthesia in this very limited number of cases may be due to psychic disturbances or a highly neurotic temperament, or perhaps to a peculiar idiosyncrasy which makes the patient, in a measure, intolerant to the anesthetic effect of the drug.

Summary of Clinical Results

The committee now has a detailed record of clinical experiences with butyn in the performance of several hundred major operations on the eye and the nose and throat. These include cataract extraction, iridectomy (including that done for the relief of glaucoma), trephine operation, magnet extraction of foreign bodies, tenotomy and advancement of the ocular muscles, pterygium operations, removal of cysts and other tumors from the eyeball or lids, grattage, and a few cases of plastic surgery of the lids including the correction of entropion and ectropion. As yet, no enucleations have been performed under butyn anesthesia, but we believe that such an operation may be performed very satisfactorily.

Local anesthesia is put to the best test when used for operations which involve cutting the iris or extrinsic muscles of the eyeball. On December 1, the committee had a record of thirty-nine cataract extractions combined with iridectomy, twenty-three iridectomies for glaucoma or as preliminary to cataract extraction, twenty-one capsulotomies and iridotomies, and

eight muscle advancements, all satisfactorily done under butyn anesthesia. Aside from this, there were a large number of other eye operations requiring less profound anesthesia which were performed satisfactorily under butyn.

In nose and throat surgery, butyn anesthesia has been used in virtually all of the major intranasal operations, including submucous resection of the septum, turbinotomies, opening of accessory sinuses (including exenteration of the ethmoid cells), tonsillectomy and adenectomy, in all numbering nearly 200 cases.

In substantially all of these cases, including nose and throat as well as the eye, the anesthesia has been very satisfactory, and the few exceptions are considered exceptions such as might occur under any local anesthetic. Two-percent solutions of butyn were used for nearly all of the eye operations, whereas 5-percent solutions were used in most of the nose and throat operations. If more extended experience confirms our present belief that there is little cause for apprehension concerning toxic effects from the judicious use of butyn, then a 5-percent solution may be the strength of concentration preferred in some of the major operations in which profound local anesthesia is desirable and has heretofore been sometimes difficult to secure.

A detailed report of each and every one of our cases would extend this report to an unnecessary length, but will be submitted if deemed either advisable or necessary.

Conclusions

The result of the clinical and experimental use of butyn seem to justify the committee in arriving at the following conclusions:

1. It is more powerful than cocaine, a smaller quantity being required.
2. It acts more rapidly than cocaine.
3. Its action is more prolonged than that of cocaine.
4. According to our experience to date, butyn in the quantity required is less toxic than cocaine.
5. It produces no drying effect on tissues.
6. It produces no change in the size of the pupil.
7. It has no ischemic effect and therefore causes no shrinking of tissues.
8. It can be boiled without impairing its anesthetic efficiency.

Respectfully submitted.

Albert E. Bulson, Jr., Fort Wayne, Chairman.
William Zentmayer, Philadelphia.
Edgar S. Thompson, New York City.
H. Maxwell Langdon, Philadelphia.
Harry S. Gradle, Chicago.

The Diagnosis, Prognosis and Treatment of Carcinoma of the Rectum

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1. *Diagnosis*

I SHALL begin this instalment of my article by citing several statistics, in order to show the demand for diagnosis in rectal carcinoma:

In forty-eight cases seen by DuPan, some nineteen (or nearly one-half) had been treated for "constipation" or for "piles" during from two to six months, and without a single digital examination having been made. Desmarest, the Paris surgeon, wrote not long ago that he had had fifty patients admitted to his wards in the previous three years, most of them inoperable. His colleague, Bensaude, the gastroenterologist, some years previously stated that, in his private practice, he had seen sixteen patients with cancer who had been treated for "colitis."

During the War, MM. Foisy and Rolland reported the case of a soldier, aged 21, who entered their hospital with the signs of chronic intestinal occlusion and in whom rectal palpation speedily disclosed the presence of cancer. The first manifestation dated back some nine months and, while the man had been transferred from one military hospital to another during the interval, the diagnosis had never been made. Colostomy was done at once, and a fatal issue supervened in about a month. Necropsy showed the growth extended up about 3.5 inches, and it was adherent to all structures in the vicinity. There was beginning invasion of the sacrum and coccyx; and, the right ureter being compressed near its vesical orifice, hydronephrosis had been produced,

though this last—to be sure—had been detected.

So much for France. But, we are not to be outdone in this country. In fact, two series are recorded from Nashville and from Bismarck, N. Dak., respectively. The former is narrated by Floyd in his essay on "X-Ray and Radium in Malignancies." Thirteen patients with rectal cancer were seen, seven were inoperable when first seen; and another came in with complete obstruction of the intestine, resulting from a rectal cancer which had not been diagnosed.

Quain (of Bismarck) tells us that he has had under observation, ten subjects with incurable and hopeless cancer. Of these, six had consulted their adviser repeatedly; yet, no examination had been made save an occasional inspection merely of the anus. Three of these patients were under 40 years of age.

I have myself quite recently seen a case which is further evidence—if any were needed—of the unsatisfactory way in which malignant conditions are looked after:

Miss M. B., aged 29, consulted me for involuntary bowel movements, together with a discharge of mucus. She had lost 20 lbs. in weight, was weak and nervous. Five years prior, the patient fell, striking on coccyx. A fortnight later, the pain in the region became so great that she was confined to bed. The pain finally subsided, though with periodic attacks since, and in fact was quite painful at the time of my examination.

Up to about 7 months before her coming to see me, the bowels had been regular. Then, she suddenly became constipated, and for the first time noticed blood and mucus in the stools. These bloody discharges had been continuing since, while for several months control of bowels had been gradually lost. A surgeon was consulted, who did not consider the condition serious, and she was assured that the trouble could be removed by "absorption." Examination under general anesthesia revealed a hard mass completely filling the pelvis from the anus as far up as the finger could be carried through the hard, resistant mass. No enlarged nodes were detected. This patient lived not far from Buffalo, and, as she strenuously objected to operative measures, she was advised to return home and seek radium-therapy at the New York State Institute for Cancer.

Did space permit, I could bring forward many more, but, unfortunately all to the same effect. It is evident that diagnosis is urgently needed, and that it be established early enough to give some prospect for operative intervention to be successful.

Education of Laity

Early diagnoses are—and can be—made only by educating the lay-public to have periodic examinations after they reach the "cancer age." The American Society for the Control of Cancer, which is composed largely of laymen, attempted to have the time from Oct. 30, to Nov. 5, last, set aside to be known as "Cancer Week," for the purpose of educating the community through talks by members of the medical profession, but, if the experience in Chicago is any criterion, the movement can scarcely be deemed a success.

In spite of the millions spent in the last two decades, here and abroad, for cancer research, we know nothing, so far, of the cause of cancer. Nor have we any reliable test for detecting its presence early, where it is not visible nor palpable. Abderhalden's method, hemolysis, the meiostagmin test (of Ascoli) and so on, have all—as we know—been found wanting.

Leading Symptoms of Rectal Cancer

Bleeding, pain and diarrhea are the stock symptoms of carcinoma of the rectum. In the series of 542 cases at the Middlesex Hospital (London), tabulated by Colwell and Woodman, 20 percent had blood in the stools as the first symptom; another 20 percent had pain; and nearly as many (16 percent) had diarrhea.

For all practical purposes, then, the early symptoms are those of ulcer; to be followed by evidences of gradually-increasing obstruction.

Many individuals, who complain of little or no discomfort, nevertheless have a carcinoma in an advanced state of development: Witness the seven cases of Colwell and Woodman's series in which the famous "ribbon-feces" were the first complaint. Notwithstanding the fact that the mass must have reached a considerable size, other manifestations were presumably absent.

In a very aged patient seen by Brodie, there was neither pain nor inconvenience, yet the rectum was completely occluded by cancer which had ulcerated through into the vagina. The condition was discovered by her servant. Again, Cruveilhier related an extraordinary case in which the cervix uteri protruded into the bowel through a cancerous ulceration and, on palpation, it was mistaken for a scirrhous mass!

My friend, Mr. Mummery (of London), saw a patient just after return from a walking tour in the mountains, covering ninety miles in five days, who felt perfectly well except for a slight diarrhea. Yet, on examination, a large inoperable carcinoma of the rectal ampulla was discovered.

Bensaude, seeking for a patient on whom to

demonstrate the method of proctoscopy to the students, had a man referred who had merely complained of a few dyspeptic manifestations with some slight attacks of bleeding. After apologizing to the class for not being able to present a more instructive case, he proceeded to the examination and was astonished to find a carcinoma, about 5 inches above the anus, the presence of which was entirely unsuspected. Similar cases have occurred to every proctologist.

Regular Examinations for Persons of "Cancer Age"

The examples just cited emphasize the suggestions I made before the American Proctologic Society, so long ago as 1908: Namely, that every person who has reached the so-called "cancer age" should be examined at regular intervals for evidence of commencing carcinoma; not necessarily in the rectum alone, but (in the female for example) of the uterus also. Neither the patient nor the practitioner should allow interest in these periodic examinations to slacken. At that time, I referred to the case of Powers (of Denver), in which such examinations were made at regular intervals after excision of a mammary carcinoma, and eighteen years elapsed before the search was rewarded by discovery of a recurrence in the scar.

Responsibility of Family Physician

Here, the responsibility of the family physician is great; for, he is usually the first one to be consulted. He must not content himself with a perfunctory diagnosis of "piles" without even inspecting the anal region, and an equally perfunctory prescription of ointments. Jones states that, of all the patients entering the Massachusetts General Hospital with cancer of the rectum, 75 percent had been treated for a longer or shorter time for hemorrhoids, the remainder for "diarrhea." In case of doubt, life should not be jeopardized by a procrastinating policy, but advantage taken of consultation with a specialist.

It has been shown of late years that a large proportion of malignant growths originate in scar tissue. Patients with rectal cancer often give a history of previous operations on the bowels. Does the cancer occur in the cicatricial tissue left from an operation for some minor condition done by one of the usual methods; ligature, clamp and cautery, or some other technic for hemorrhoids leaving much scar tissue and, sometimes, stricture? May it not be grafted on the scar remaining after the common incision method of operating for fistula? All proctologists have seen large and ugly scars, from time to time, following the last method. Here is a suggestion to be followed: Secure smooth healing by resorting only to such procedures as leave a minimum of cicatrical tissue, hence the least possible nidus for future mischief.

So much for my remarks nearly fourteen years ago. A striking exemplification of my warnings as to scar tissue has since been furnished by the late Prof. Morestin (of Paris): A boy, aged 3, was severely burned over the sacrolumbar region, thighs, etc. He was confined to bed over two years; in fact, the wound never healed completely. And, twenty-nine years later, cancer developed in the scar.

Age Incidence

Of course, when we refer to the "cancer age," we instinctively think of elderly subjects, the "bemossed heads," as our late enemies, the Germans, poetically call them. Now, in the part of the body in which I am especially interested, the cancer age entails consideration of decidedly younger subjects. I have tabulated considerably over 5,000 cases (5,352 to be exact), and found that 683 patients were under 40, and 30—of the 683—under 20 years. Of these 30 patients, again, three were 11; four, 12; three, 13; three, 14; four, 15; three, 16; six, 17 years, etc.

Foissy and Roland's patient, and the three referred to by Quain are other examples.

Nevertheless, in a large series, the average age is well advanced: In three series from Breslau, London, and Budapest respectively, it was 47.4 years, 49.7 and 57.4. (In my tabulation, 1,036 subjects were 41 to 50; 1,488 from 51 to 60; and 1,384 from 61 to 70 years old. Hence, nearly 80 percent were over 41 years of age.

Examination Not Difficult

When confronted with a patient suspected of harboring a cancer of the rectum, the examination is marvellously simplified by the fact that the mass is usually within reach of the finger—that is to say, the lower edge is, even where the upper edge is too high for palpation. This digital examination is at the command of any member of the medical profession, no matter how modest his diagnostic outfit. All the paraphernalia needed are a finger cot and some lubricant—neither of which is indispensable. Such simple methods were successfully resorted to in 108 of the 151 cases seen by Foges.

The findings, on palpation, with carcinoma of the rectum, will depend on the location of the growth, its stage of development, as well as the position of the patient: If the mass is

located 2 to 3 inches above the anal margin, it can be readily detected by internal palpation, with the patient in either the left—or right—lateral semiprone posture. The immediately surrounding tissues will give a thickened or infiltrated sensation to the examining digit. If the malignant mass is of the rapidly-growing type, two or more nodules may be felt.

In the early stage, the mass is small, rather firm and movable. Later on, it will have increased in size (of course) and, as the apex, or surface, is broken down, a rather ragged ulcer is left with characteristic, everted, friable and infiltrated edges which are easily palpated. Also, the base of the tumor will have become hard, more or less fixed and nodular (in some instances, the nodules extending well into the lumen of the bowel); and the lymphatics along the rectal wall may be palpated. Should the mass extend down to, or near to the pectinate line, enlarged inguinal nodes may be made out by palpation.

When the tumor mass is quite large and located higher up, say 4 to 5 inches from the margin of the anus, (or at the rectosigmoid junction), then, with the patient in the Trendelenburg position, by combined internal and external palpation (aided by deep inspiration and expiration) the mass may be felt behind or above the pubes if the subject is thin; but, if fleshy, it probably cannot be made out. Usually, such an examination will be greatly facilitated if the patient is placed under the influence of a general anesthetic. In carcinoma still higher up, in the pelvic colon, the mass may be palpated above the pubes or in the inguinal region.

Differential Diagnosis

Carcinoma of the rectum is to be differentiated from intussusception, simple stricture, gumma, tuberculosis and the benign tumors. The first of these is even, regular and soft, unlike the indurated feel of carcinoma. Stricture is also even and regular, soft (compared to cancer), nor does it bleed on examination. Gummas, in addition to being uncommon, are not rough or indurated; there is usually a specific history, and doubts are usually cleared up by the Wassermann test. Tuberculosis is apt to be deceptive. Luckily, it is here rare, and some of the diagnostic tests should be resorted to.

The only benign tumors likely to cause confusion are, polyps and villous growths. The former, as they are uncommon in adults, small, soft and non-indurated, and by the proctoscope are seen to be pedicled, should not cause much difficulty. In the villous tumor, there is no induration; anyway, it requires excision.

In sarcoma, the tumor is beneath the mucosa and the latter is usually movable over it.

Carcinoma, growing back, will lead to pressure symptoms on the part of the sacral plexus, and simulate sciatica or hip-joint disease; indeed, it has invaded the joint itself a few times. In the male, vesical symptoms may overshadow the rectal ones where the mass grows forward.

In the case the details of which we owe to Morris, a patient was sent in with the diagnosis of "carcinoma." For a year previous, she could pass only small amounts of feces with great effort, except by the aid of enemas. Morris diagnosed cyst of the ovary and, on operation, one was found jammed into the pelvis, obstructing the rectum and accounting for the symptoms. In another, related by Hawthorne, a woman of 28 had frequent bowel movements, with some pain in the abdomen, and was treated for several months for "colitis" before it was discovered that she had a carcinoma.

"Bleeding, pain and diarrhea" as the early symptoms of cancer of the rectum means merely a rehash of what is—and has been—in the textbooks for the past forty years or more.

Education Is Needed

It is not rehash but education that is needed. We know that chronic irritation plays a part in the causation of cancer; that cancer never begins in healthy tissue; and that it is curable in the early stages. Some pre-existing condition, then, is necessary for its beginning. Shall we tell this to the people and help them to avoid this terrible disease? Or shall we sit idly by? Shall we voluntarily begin educating the public or shall we wait until the public compels us to do it? That is the important question.

Educate the public to get rid of any ailment or condition that they may have which fosters the development of cancer. We know that extracting an infected tooth, removing the diseased tonsil or an infective hemorrhoid, may relieve a neuritis of the arm or pain in the region of the stomach, and so on. Since this is true, is it not also true that, if we had recognized and removed the diseased tooth, tonsil or pile earlier, the neuritis or pain about the stomach would not have developed? If this holds good with reference to benign diseases, it must a priori hold good for malignant conditions as well.

[*To be continued.*]

The Subcutaneous Method of Vaccination Against Smallpox

By FRED S. SPEARMAN, M.D., C.M., Rifle, Colorado

EDITORIAL COMMENT.—Doctor Spearman's suggestion to produce immunization against smallpox through the hypodermic injection of the smallpox vaccine, is worthy of every attention and consideration. The old-established method of vaccination, by rubbing the material into the superficial skin wound, is brutal; it is archaic and opposed to modern surgical customs. Moreover, it opens the door to all sorts of infections and complications, all of which constitute the most important factors for engendering the existing widespread opposition to vaccination.

THE recent outbreak of smallpox of a severe type, in Denver and other localities, has given rise to considerable discussion as to the best method of vaccinating against this dreaded disease, and there seems to be much difference of opinion on the subject.

The old-fashioned process of scarification is falling into disfavor on account of the bad results that frequently follow its employment. Owing to the size of the denuded area and the traumatism, which is greater than in other forms of vaccination, there is more liability to infection than is the case where the operation wound is smaller. Among the ways suggested to take its place are, incision, using either the sharp point of a scalpel or a needle; puncturing the skin with a needle or fine-pointed lancet; the socalled endermic method, the instrument penetrating only the superficial layers of the epidermis; the hypodermic method in which the vaccine is injected either intradermally, that is, into but not through the skin, or subcutaneously, meaning beneath all its layers into the underlying tissues. I am laying stress on this latter point as I have found, in talking with other physicians, that some of them have confused endermic, or intradermal, inoculation with subcutaneous, regarding them as the same thing—which is not in accordance with facts. In addition to the varieties mentioned, some physicians make use of a small chisel, rotating it so as to scrape off the outer layer of skin, while other vaccinators employ a caustic to produce a blister which they puncture, then apply the virus to the raw area. These are simply variations of the types I have before enumerated, however, and teach us nothing new in regard to improved means of smallpox vaccination.

Subcutaneous Vaccination

A paper on the subject of subcutaneous vaccination was published in the *Lancet* (London) for August 16, 1919 (p. 285), and also in the *American Journal of Medical Sciences*, for November of the same year, by Major J. R. Goodall of the Canadian Army Medical Corps, giving his personal experience with the method. On a number of occasions, he had discussed this form of vaccination with a colleague, Dr. Geo. Hume, who had used it for some time in his private practice before entering military service, and they finally decided to give it a tryout. Altogether, they inoculated more than 6,000 soldiers and children of officers. In addition to this number, men belonging to other brigades were vaccinated by their medical officers in the same way, although Major Goodall does not give any figures. The vaccine used was the ordinary variety contained in capillary tubes, such as is prepared by different makers of the product. The individual dose was from half to three quarters of the contents of a single tube. The technic employed was as follows: The virus was expressed by the rubber bulb into a sterile container, and enough sterilized water added to make 1 mil, or about 16 minims, for each injection. The fluid was then drawn up into a hypodermic syringe, rendered thoroughly aseptic, the skin at site of inoculation painted with tincture of iodine, and the needle inserted diagonally and deep enough to penetrate into the subcutaneous tissues. Where a large number of persons was to be treated, a syringe with a capacity of 20 mils was used, a fresh needle being attached for each injection. When the vaccination "took", the arm would become swollen and reddened in from two to four days, as a rule, the reaction being similar to that following the ordinary methods of vaccination, only that it came on a day or so earlier and was usually not as severe. Instead of a pustule developing, followed by an open sore or ulcer, a lump or nodule would form in the subcutaneous tissues, disappearing in a few weeks' time. In fine, the reaction was very much the same as that obtained after antityphoid inoculation. There

were no cases of infection among the thousands vaccinated, which was indeed an unique record, and very few had to lay off duty for more than a few days, the majority experienced little or no inconvenience.

The advantages of subcutaneous injection are, the rapidity with which a large number of people can be vaccinated; the absence of an external sore, with consequent danger of infection by pathogenic organisms; no unsightly scar is left at the point of inoculation, such as we have often seen where sepsis had developed; the lessened disability as compared with the sequelæ of the other methods; children have little or no objection to it, especially the smaller ones. It should be the method of choice among the insane and feeble-minded, as there is no scab to pick at, with danger of subsequent infection; the percentage of "takes" is higher than that obtained in the incision or scarification methods. In Goodall's experience, the failures amounted to only about 8 percent. In his own case, he had been vaccinated unsuccessfully ten different times, but had a typical take when inoculated by the subcutaneous route. Vaccination can be made a clean surgical operation, whereas we know that it is impossible to sterilize the skin where any of the "open" methods are used. Lastly, we may be able to demonstrate more accurately by this means those who are naturally immune to smallpox.

Objections to the Method

One objection urged is that there is nothing to show that the subject has undergone successful vaccination, for, although the absence of an unsightly scar can be urged as a distinct advantage, especially among women "in society", still in many communities a scar is regarded as the only criterion of a successful "take". In examining applications for life insurance, the examiner is required by some companies to report whether the applicant has a mark showing that he has been successfully vaccinated. In either of these eventualities, however, the difficulty can be overcome by furnishing a certificate.

I have been asked by some physicians if it is not a fact that vaccine administered hypodermically is absorbed so quickly that it can not do any good. In my belief, the very opposite of this holds true, as there can be little doubt that the lump, or nodule, that forms after inoculation is simply what might be termed a "subcutaneous pock", so that, whatever protective virus there may be in the virus, is completely taken into the body.

It has occurred to me that, if subcutaneous vaccination after careful trial demonstrates its superiority over other ways, it might be possible to add some inert substance such as finely powdered charcoal, say, to the vaccine; this would leave a permanent tattoo mark that one could "show the world". This is merely a suggestion, however, as I have never tried out such a process or heard of anybody else who has.

Respecting the objection that there would be greater danger of contracting tetanus or other infections if the vaccine virus were contaminated, I do not think that the point is well taken. If the vaccine is not clean, it should not be used in any case; and this objection could also be urged against any of the "puncture" methods, whether endermic, intradermal, or what not. Furthermore, we know that infection following vaccination is due, in practically all cases, to faulty technic at the time, or carelessness in failing to keep the parts clean afterwards. Vaccine is now prepared so carefully, the virus being combined with glycerine and various mild antiseptics, that the chances of getting hold of an infected product are reduced to the minimum. If one should happen to obtain virus in which the spores of tetanus were present, it seems to me that the danger of inoculating the subject would be about the same in any form of vaccination. B. tetani is an organism whose growth is favored by the absence of air, and vaccination, even where done by scarification or incision, may be regarded as an anaerobic process—the formation of pustule, etc., producing such a condition.

In looking through the literature, I have been unable to find anything on the matter of subcutaneous vaccination with the exception of Major Goodall's article, from which I have drawn largely for this paper. The puncture method was employed by some even in Jenner's time, and French writers favor its use today. Gould and Pyle, in their work, state that, owing to the fact that cowpox virus is so diluted or attenuated by modern methods of manufacture, it is not as effective where puncture is used.

Endermic Vaccination

Among the papers on endermic and intradermal vaccination, I will mention but two: Wm. S. Walsh, M.D., in the *Maine Medical Journal* for May, 1919, gives his findings and conclusions in about 280 cases where he had made use of the former way; while, in the *Journal A. M. A.* of August 24th, 1918, there is a paper by Lieut. Louis T. Wright, M.R.C., giving his experiences with the intradermal

method in 227 cases. Both authors obtained a larger proportion of successful results than could be shown by the older forms, more than 70 percent—many of their cases had never been successfully inoculated—and, as a control, Dr. Wright also vaccinated the men at the same time by incision, the results being much in favor of the intradermal process. The objection to either endermic or intradermal vaccination is, however, that an external lesion is produced, which is not the fact when we go by the subcutaneous route.

In my practice at Rifle, I tried out the method as advocated by Dr. Goodall, and, although the number of cases was very limited in comparison with his, my results were the same. It is well for the medical profession to be cautious about taking up with new ideas, of course; still, the fact that such good success was obtained in a series of more than 6,000 cases would seem to indicate that the matter is well worthy of careful investigation and trial.

A Non-Surgical Treatment of Diseased Tonsils

By CARL F. ROBINSON, M. D., Barre, Vermont

JUDGING from appearances, the surgeon has had his day and the patient is not sorry. The advent of the x-ray, radium and other physical measures daily removes from his hands conditions which formerly required operation. Several years ago, the fibroid tumor succumbed to the x-ray therapist and, later, to the radium man. Goiter has been delivered from the surgeon, and now comes the tonsil.

The patient who, when told that an operation for diseased tonsils was imperative, used to lie awake a week before the operation, worrying, now calmly discusses the matter with the physicist and arranges for a day for the treatment.

Witherbee[1] started the ball a-rolling when he read his paper from the Rockefeller Institute, in New York City, before the American College of Surgeons. Then Murphy,[2] Craig, Hussey and Ernest Stern followed it up. Now it is universally known that the x-ray will produce a decrease in size and a smoothing out of the tonsillar surface, due to its effects on the lymph follicles. The effect on pathogenic bacteria, four weeks after treatment, is reported by Witherbee to be nil; however none can be found on the tonsil after x-ray treatment because of an evacuation and drainage of the crypts and also through an increase in local phagocytosis.

Radium Action Compared to X-Ray

Radium is practically identical in action with the x-ray when used in well-screened doses. The only advantage of radium is that of convenience and time. I began using radium, in these conditions, early in 1921 and find it easier; the patients usually will choose it rather than the x-ray. There is no noisy apparatus and one treatment of a few hours' duration only is needed. The x-ray treatment, on the other hand, necessitates from six to eight fortnightly trips for treatment. As far as cost to the patient goes, there is no difference.

The effect of radium or x-ray on diseased tissue is commonly called "selective action." This action is now generally admitted.

Dominici[3] termed the different behavior of the various elementary cells toward the rays, "receptivity" or "sensitiveness." Colwell and Russ[4] termed their action "selective absorption." Bergonie and Tribondeau[5] formulated the law that "immature cells and cells in an active state of division are more sensitive to hard rays than are cells which already have acquired their fixed adult morphological or physiological characters." All elements which are embryonal are destroyed by an amount of radiation which would cause only slight reaction in the surrounding mature or highly differentiated cells. In this light, it is the experience of all radiologists that the tissues of a child are more easily altered by radiation than the corresponding tissue elements in the adult.

[1]Induced Atrophy of Hypertrophied Tonsils by Roentgen Ray. *Journal A. M. A.*, 1921. Vol. 76, Jan. 22, p. 228.

[2]Murphy, Witherbee, Craig, Hussey, and Stern, *Journal of Experimental Medicine*, Vol. 29, 1919.

[3]Dominici, H., *Arch. gén. d. Méd.* 1919, v. 3. sér. Centralbl.

[4]Colwell and Russ, "Radium X-Ray and the Living Cell," 1915. G. Bell & Son, London.

The tonsil, being made up, histologically, chiefly of lymphoid tissue and a connective-tissue framework, is very susceptible to the effects of either the x or the gamma ray, the same as any of the embryonal cells of the body. Witherbee says: "The proliferation of cells of the lymphoid tonsil shows a much larger increase in lymphocytes than in the germinal center of the follicle. The fibroid tonsil, on the other hand, shows an increase in the germinal center of the follicle. The germinal center of the follicle is characterized by the different forms of lymphoid cells all the way from the embryonal type to the mature cells at its periphery. Therefore, one finds numerous cells in this area in various stages of mitosis."

The infected fibroid tonsil, which is small but which will exude a thin, milky discharge on pressure, reacts beautifully to radium. I have also treated many chronically enlarged tonsils in patients with histories of repeated tonsillar abscesses. Six weeks after treatment, no tonsil can be seen unless the anterior pillar is retracted; and then a small, healthy tonsil can be noted. Unless treatment has been too strenuous, this tonsil still functionates, keeping on doing its work as one of the first forts of defense against bacterial invasion.

Walter A. Wells, M. D., F.C.S.[6], Washington, D. C. writes, "In addition to the mere reduction in size of the tonsil, a difference is remarked in the appearance of the organ. A tonsil that previously presented an irregular, nodulated surface, or, perhaps, has been of the socalled ragged or spongy type, now appears smooth, firm and pale. Very important proof that atrophic process has successfully attacked the diseased lymphoid structure is found in the progressive lessening or colonies of bacteria and, especially, in the fact that we can not obtain pathological exudate from crypts on pressure. The author has histological proof of the effect of radiation in bringing about cellular atrophy. I have had sectioned and examined microscopically tonsils that have been radiated and then removed surgically at varying intervals of time after radiation. In the course of time and with sufficient dosage (repeated if necessary), it is certain that we can obtain an atrophy of the tonsil which we may liken to the normal physiological atrophy, and that all physical evidences of disease are made to disappear."

Influence of Radiation on Contiguous Parts

Another result is noticed, and this seems to me to be nearly as important as that of treating the tonsil. This is, the result of the penetration effect of the rays which treat the throat as a whole as well as the tonsil. The adenoid, the infratonsillar nodule, the lingual tonsil and the chain of lymphatics which extend well up the lateral walls of the throat to the eustachian tube, all receive radiation. These tissues are all more or less diseased and exhibit markedly hypertrophied and infected crypts. The gamma ray effect on these tissues is apparently similar to that produced on the tonsillar tissue. I feel that the cleaning up of this area is important and it leads to success in relieving the symptoms which we hope to cure as much as the treatment of the tonsil. We have all removed, surgically, tonsils with the idea of curing a neuritis or rheumatism, only to find that the disease progressed after the operation just as before. Why? Because the dissection of these individual infected crypts is impractical and tedious and is practically never done.

This method of treatment, by radiation, offers much hope to the sufferer with chronic endocarditis or pericarditis, or to the hemophiliac who needs to have a possible focus of infection removed and should not be subjected to the surgical risk of an operation or an anesthetic. It offers a wonderful loophole for the timid and nervous patient or for the fearful parent of a child that needs tonsil treatment. I believe that radium is to be preferred to the x-ray, although I use both. Many a timid child or woman hesitates to even lie down under or over an x-ray tube because of fear of the more or less noisy apparatus. Radium is silent and is free from this source of objection.

Conclusions:

1. One application of radium, requiring only six or twelve hours.

2. It is safe, painless, noiseless and requires no anesthetic.

3. It cleans up the whole throat, being in this manner superior to surgical operation.

[5]Comp. Rend. Soc. d Biol., December, 1906.

[6]Wells, Walter A. "On the Practicability of Effecting a Complete Atrophy of the Tonsils. *Southern Med. Jour.*, Nov., 1921.

Human Readjustment as the Prime Resource for Clinical Reestablishment

Memoranda of Resources for Meeting Clinical Conditions Without Drugs and With No or Little Apparatus, at Any Time and Place, and Through Orthokinetics or Some Modality of Motion

Part II

By J. MADISON TAYLOR, A.B., M.D., Philadelphia, Pennsylvania

Professor of Physical Therapeutics and Dietetics, Medical Department, Temple University, Philadelphia, Pa.

THIS second part of the paper may well begin by an invocation to the emotions as a basis for fluctuations in human reactions. The physician, in his appeal to the latent dynamics of a patient, makes an impression on the feelings; towards enhancing self-confidence, the power of resolve to recover, to self-reinstate and to resume his or her place in the social procession. The appeal may be in behalf of resolve or fortitude, or profit, of ambition, or for expansion of physical and social contacts. Personal contacts are always the most moving stimuli, however much one can be swayed by spirit projection. The nerve centers in an ailing one are out of balance; in most cases, they are more or less exhausted. Some may respond little, others less, others in great excess. The cells then overvibrate.

Hence, an appeal on the part of the physician can be most profitably made to arouse sensations, and for relief; through use of simple, natural things, such as by touch, pressure, acceptable modifications of heat, cold, light, air, moisture, of local compression, support, nearness, protection, and the indescribable human responsiveness. From the simple, this domain can be amplified or expanded to the complex, and, by reason of modern resources, almost indefinitely.

The primal desire of a frightened or hurt or ailing child is for nearness to a personality, contact with a being who seizes, holds, enfolds, comforts and sympathizes. It is only later that the fetish idea arises, as for charms to fend against an evil influence, the mysterious, the symbol of concealed power, later of drugs, medicines, gradually verified as really potent through scientific researches.

I.

It is my purpose to present herein personal experiences and observations of a life-time of effort to learn the best measures for relief or cure by other means than drugs. This includes special and invaluable methods of diagnosis which aim at reaching necessary information, but from a somewhat different angle of approach to those commonly in use. They form a mere widening of the clinical horizon and are supplemental to what can become discerned through other avenues. Many coexisting and by-effects present which demand relief to reestablish normality.

The best ones consist of the use of remedies based on the infinite modalities of motion which, when they become ventilated and elaborated, as are pharmaceutics now, must greatly amplify our control over disease, especially of the effects of disease, thus making a long step toward a comprehensive system of therapeutics.

The effects of motion exerted upon, or by, conscious control of the body, that is, biokinetic agencies, when wrongly applied, can seldom or never do harm, since they only release pent-up, or awaken and put to work suppressed, energies and these influences tend to reestablish poise through reflex circuits. They overcome commotion in the sensory or emotional realm by putting on or taking off power as needed, thus regulating heat (or suspended motion) and in some acceptable, tangible form.

In lecturing to my class at the University, each year, it becomes more difficult to do justice to so expanding a subject and in so few hours. Hence, I prepare an outline of resources (reminders) which each year demand revision as new and promising points arise, also as simpler, clearer, and more exact interpretations are offered.

So many and so valuable are these advances that I have been urged to publish an outline of topics and my reactions to them. They may serve to remind some readers of promising points which at first made only a passing

impression. Other readers may have their critical faculties aroused, and it is my hope that they will set me right when in error, or mention their own reactions and make their own contributions. I should welcome heartily and profit by such illumination. These labors will not be lost since, what they tell, will be used in candid revisions of my own notions. Thus all shall profit by mutual efforts at expanding and verifying knowledge of means for rendering the best service to both physician and patient. I should esteem it a great distinction to act, in my old age, as one medium of interpretation of a department of human welfare—than which there is no greater.

II.

In surveying the field of healing through socalled physical therapeutics (orthokinetics), two divisions seem pertinent. First: those which the physician can apply directly to and thereby guide the patients, where he is the chief agent; and second, those which the patient must do or perform in order to get the best ultimate results.

By long odds, the best and most radical remedies consist of a combination of things done to a part, followed immediately by guided performance of that part, or by associated motor parts, not only such as are strictly voluntary but semi-voluntary, and often involve some involuntary response. And yet our medical students are taught little or none of this. Only when they come to work in hospitals or out in the clinical field, they are supposed "to be given the power" to know how and what to do, by some sort of divine inspiration. When one comes to appraise the motor intelligence of the average man, one learns how pitifully unintelligent he is as a motor mechanism.

One must aim at *appraising conditions of disorder,* which includes diagnosis of causal agencies *progressing at one level,* increasing or subsiding, and such effects or residua of existing or preexisting manifestations of disorder, or disease, or injury, as may urgently need to be reckoned with, not losing sight of the problem in its entirety. In fact, it is well, in determining the outstanding malady, to begin the search from the periphery backward, all the while appraising the primary causes and clinical progress. This procedure too often is regarded as unscientific; but, while it certainly does sometimes fail of getting complete results, it is often the most economic in the long run.

In applying remedies, it will be found that prompt and suitable instrumentalities, remedies applied from the outside, are capable of doing more to readjust the disordered mechanism and thereby reducing deteriorative changes, than do any remedies taken into and working from the inside alone. Or, as Sir A. E. Wright has shown, however radical may be the remedies, sera, bacterins, etc., injected into the tissues, muscles or blood stream, even then agencies applied from the outside, e. g., massage at or near the site of injection, will go far toward distributing them and expediting favorable reactions.[1]

Take also, for example, a condition of protective tonic spasm, so common and widespread an evidence of an excess-defense reaction to pain or irritation. Here the means for releasing the spasm include (a) reducing the local tension or compression upon blood and lymph vessels, (b) relieving reflex irritation on hollow viscera, on digestive, respiratory, genito-urinary, etc., mechanisms, but also (c) the release of tension in the overborne congested or anemic nerve centers, spinal, ganglionic and nerves in continuity, hence (d) the effect is, to amplify oxygenation and oxidation and chemical interchanges in the organism as a whole.

Thus, whatever else be the form or kind or direction of remedy, e. g., from pharmacals, rest, mental readjustment or tranquillity, feeding, all the way to spiritual uplift, the action of some mode of energy applied through motion, or motion arrested (heat), or electricity, or rays, or radium, may be likewise necessary to start the actions which make for harmonious interaction as a whole. Heat acts as a catalytic or enzymatic (trypsin; *Op. Cit.*) or starts things going in the right direction to secure rythmicity, coordination and restablishment.

Balance in energies is the resultant of vital powers in harmonious action which make for stabilization in living bodies. It forms a great defense resource as well as a group of favorable conditions which need just the right help from the expert in point of direction, degree and occasion.

Self-adjustive measures depend on habitual, and particularly on conscious, equalization of forces. Results in the endeavor of healing accrue *in proportion as right estimates are made of what nature is striving to do, can do, and will do, unless thwarted.* As the limit of spon-

[1] (See article by Author: "Supplemental Action in Reparative Measures, with special reference to Serogenic Remedies Reinforced by Kinetogenic Agencies." *N. Y. Med. Jour.,* Sept. 8, 1920.)

taneous readjustment is reached, there the point begins for art and science to add its contribution one way or the other.

By the same token, where an imbalance or an impasse exists, the hand of man, like an extended motor axone from the brain is capable—when the reflexes are adequately conditioned—of working miracles of healing. Hence, artistic repair comes by observing closely what, where, and when, and how, to interfere, to throw the weight of judicious effort one way or another into the oscillations. The acme of therapeutic art is, to supply just the right push or pull or steadying required. Take as example so familiar an instance as gall-stone trouble.

The aim of nature is, to expel a foreign body, a source of irritation; not, to stop it. To supply morphine, means to check the extrusion process just at the time when nature is making the most earnest and judicious efforts to rid the organism of a something foreign which has remained in it, but has now caused the limit of endurance to be reached. Likewise, the pain reliever destroys the sensory warning, the index of destructive action. The process can be controlled by other means much more safely, satisfactorily and economically.

For palliation of suffering, there are hot applications, hot drinks, irrigation of the bowel with hot water, etc., etc. For assistance in the expulsion, there are the local reflex mechanisms to be invoked; first, the reflex of dilation of the duct; next, the reflex of contraction of the viscus; next, the supplemental reflexes of the associated or supporting muscles; and, finally, the mechanical assistance of compression applied to adjacent parts.

As here, so in myriad other strivings on the part of hampered or bewildered nature, the particular help needed is, often, the office of the thinking hand to achieve those miracles of adjustment shadowed forth in tradition, story and clinical revelation.

How to do this? Well, how to play the violin: try, learn, practice. Of course, an expert can best show how. One can let blood locally by a knife, but it is equally rational and vastly more simple, less mutilating, to relieve the congestion through manipulations, impacts, vibrations, etc., arousing reflex cooperations. Indeed, much can often be done by mere handling, somewhat like external version upon a parturient uterus.

[*To be continued*]

Memoirs of the World War

By DR. GUSTAVUS M. BLECH, Chicago, Illinois

[*Continued from February Issue, page 117.*]

The Censorship

One officer was bound to let his sweetheart know that he was at Brest. We had been told we could not use the French mails. He bought some little token and had the storekeeper mail it. I am not prepared to say that this was in direct violation of army orders, but it certainly was against the spirit of the censorship rules. I did not denounce the man for several reasons: first, because it would be two weeks until his friend got the parcel and, by that time, we would not be in Brest; if we were, the Germans could never get us unless they swept through France; secondly, because the Germans knew as well as we that troops were being landed in Brest; and thirdly, because the entire censorship business was carried to a ridiculous extreme.

On board ship, an officer was designated as censor. He, again, appointed several officers as assistants. I saw many hundred letters censored. Sometimes the elimination of certain words and phrases was sensible, sometimes not. We might not name the ship. I venture to say that the Germans knew not only the ship's name, but that all interned liners were working overtime transporting troops. The writers might not describe the fact that meals were served in four or five shifts.

"Why?" I asked.

"Because that shows that the ship was crowded," was the reply.

"It might show, that the dining room was too small or partly used to carry ammunition," I replied.

Kicks about the monotony of food, of the inadequacy of sleeping facilities (the men slept in shifts) were, of course, scissored out. One of the censors was a friend of mine. I bet him a cigar that he would not find anything objectionable in a letter of one page I would write. He accepted the bet. For an hour I wrote a simple message, avoiding any allusion to the military, ex-

cept to say that the entire headquarters was aboard. I lost the bet.

The censors themselves often felt embarrassed. A high ranking officer of the regular army, whose forefathers had served through former wars, writes a letter to his wife, who is doing yeoman work for America at home. This man may send her a tender missive or write her about some family affair. A young reserve officer, recently appointed from civil life, has the authority and, if he so will, the letter cannot be sealed until he has read every word.

Later, the censorship privilege was accorded to every commissioned officer. The entire subject of censorship had not been thought out very well for some time.

As to Foreign-Born Officers

We had in our division many officers of foreign birth. It was known that several were born in Germany. These officers came to America when mere babies in the arms of their mothers and were terribly worried lest the accident of birth would militate against them. The War Department wisely ruled that alien officers of known loyalty should be allowed to go overseas.

Shortly before the armistice, a letter reached me from home informing me that some "official with a star and credentials" was investigating my loyalty. My informant was mad clear through. The official resorted to a clumsy statement that the investigation may have been made necessary in anticipation of promotion.

I wrote back that in all probability some enemy of mine had sent in an anonymous letter because once I did say in a public address that the German army was the best in the world; but my audience gave me an ovation when I added that the Anglo-Saxon brain surely will excel the Teuton's brain, because we had the greatest individualistic initiative.

"As for my loyalty," I wrote, "tell them my race and place of birth and early education; that will answer all. Besides, the War Department knows my whole pedigree, even that a tooth is missing in my mouth. And tell these fools something else, that the Army is the last place for a spy, because I know less what is going on than you do, who reads up-to-date newspapers."

After Brest

Early the next morning, I obtained some French money. At noon, we learned that we were to leave for the front at 3:00 p. m. There was just time enough left to pack up. Some officers had agreed to send a truck for our baggage, but at 2:30, the truck had not shown up. Near the hotel, I saw an old man driving a ramshackle dray with a horse that had not been requisitioned, which must convey a good idea what the horse was like. I begged that man to help us out, and he did. A few officers placed their trunks and bedding rolls on the wagon and off we went at such a speed that I felt sure we would miss the train. Fortunately the station was not far away and a few soldiers grabbed our equipment and placed it on the train.

The driver refused to accept remuneration. I told the other officers to give him an American 50-cent piece and we handed him the money as a "souvenir." Several coaches of the train were reserved for Division headquarters. Some one had forgotten the inner man. We telegraphed ahead and at a station baskets containing individual luncheon bags were delivered to us. Each contained a bottle of *vin rouge*, a few slices of bread, two hard-boiled eggs, and a slice of ham.

At one station, a woman offered oranges for sale. I asked for the price. "Two francs." A French policeman was asked by me what the war-price of an orange was. "Half a franc," he replied.

"That woman asks two francs for an orange." He had to attend to some matters elsewhere.

I returned to the woman. A French sergeant-instructor who had been with us at Camp Logan was already lecturing her. She would not give him an orange for a franc. Evidently she knew she would sell her whole load as long as *les soldats Américains* were passing through.

Easy Americans!

In Paris

We reached Paris the next morning at 6:00 a. m. Sleep during the night was impossible. I stretched out on the floor over my raincoat, but the continuous rattling of the train and the bitter cold proved too much for me; nevertheless, I felt refreshed and hungry. We had to wait until ten before we could proceed further. A British railway transport officer at first did not seem to know whether we could get away at all.

But Colonel Naylor did not mince words. The American Government was paying for

our transportation. We were ordered to the British front; so, we would stand for no nonsense. This had the desired effect. A train would leave at 10:00 a. m. Col. Hathaway, Major Chiperfield and I went to a hotel across the depot for breakfast. There was no such thing. I started to explain to the manager that surely he had coffee, bread, eggs, etc.; all to no avail. But, Major Chiperfield lost his temper, talked in unprintable English with flaming eyes and brought his riding whip down on the table to still further augment his emphasis—and a garçon was sent out scurrying to the kitchen. I had to admit that Major Chiperfield's "French" was far superior to mine. We had breakfast.

I sauntered back to the depot. Life was just beginning on the streets and in the stores. A couple of enlisted men came to me and asked me to interpret for them so that they might secure tobacco or cigarettes. I went with them to a tobacco store. There were pipes and mechanic lighters galore, but no tobacco could be had. I went to another store, with the same result; asked whether there was any place within a mile where tobacco could be purchased, I received the information: *Pas de tabac à Paris.* (No tobacco in Paris.)

I secured some cigarette paper, though, and gave the boys a bit of the precious weed from my pouch. Half a block away was a Red Cross canteen, where we could have gotten a small can of tobacco and some cigarettes; but we did not know it then.

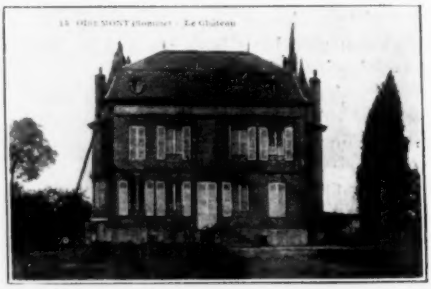
Going On Toward the Front

At ten, we were on another train and continued our journey. At four p. m. we halted for an hour. There was a small British depot near the station. In the canteen we got tea, crackers and jelly, and cigarettes. I managed to secure a package of good pipe tobacco privately.

At 8:30 p. m., we arrived at Oisemont, a village in the department Somme. It was pretty dark. Everybody seemed to have gone to bed. Finally, the British town major was awakened. He had no information about our coming. He started out with the group of officers in search of sleeping quarters. The enlisted detachment were led to a barn. Some officers fared pretty poorly that first night in billets, as I learned the next morning. I secured a small bedroom in a house the lower floor of which was a barber shop, restaurant and saloon; all three were managed and operated by an elderly woman.

Coffee, bread and meat were served me quickly, and I went to bed and knew no more until the maid brought a breakfast tray into my room. We had received instruction to report to the town major's office the next forenoon at a definite hour, but it was not until early in the afternoon that we learned that Oisemont was not our station at all, but a village called Huppy. We were to proceed to Huppy at 4:00 p. m. by lorries. I hopped on the rear of one and sat there with feet dangling. In about three-quarters of an hour, we reached our destination.

Oisemont.—City Hall Square.



Oisemont.—The "Chateau".

A British officer came up, looked at me and smiled. I asked a friend what the Britisher was laughing about. The officer opened his bag, took out a mirror and without a word handed it to me. Then I understood. My entire face was covered beyond recognition with white dust. Later, the British alluded to me as the dusty officer. When we arrived, the billeting officers had not yet arranged quarters for all. There was a delay of over an hour for many and some officers became irritable.

Oisemont.—The Egg Market.

When I thought of what was in store for us, perhaps in a few days, I chuckled.

Huppy is an idyllic village. The warm weather had brought out the rich foliage and the village impressed one as a fine place for summer sojourn. We were on the market place from which a few streets radiated in several directions. To one side was a Roman Catholic cathedral of ancient design, the fenced yard of which was a cemetery. Alongside were beautiful gardens—a park, rather—in the midst of which stood an imposing structure—a chateau, a real castle. The French call any two-story building in a garden a chateau, or castle.

The houses along the streets were small, primitive peasant houses. On one of the corners, a small two-story building had the sign: *Restaurant de la Poste.* General Bell's aid had arranged supper for us there. The meal was simple, wine too quantitative for some of us, as was the bill.

Finally my turn came to be assigned. I secured a small bed room in the attic of a farm house. There was no spare lamp in the house, so I used my electric flash light, undressed and went to bed.

The next day, headquarters troop arrived. Their train had been bombed by aeroplanes very near Huppy—(I wonder what censor could have slipped a cog?)—and the boys were jubilant because they had been "under fire." One boy had been slightly scratched by a glass splinter and he asked me with a red face and in an undertone whether he was not entitled to a wound chevron.

To my great suprise, everybody I met asked me how I liked the "show." It appeared that there was tremendous bombing during the night. That worried me because I suffered from a partial deafness of my left ear and I had heard nothing. I evaded the answer. I had slept like a log.

The next evening, I was accompanying Colonel Naylor to the chateau occupied by General Bell. The two officers busied themselves over maps on a table by candle light. I was asked to come in. My astonishment was great when I saw British maps, an irregularly outlined area of which showed in print "33rd Division." So the British had our area all assigned before and yet we were sent to Oisemont and the representative there knew nothing about us!

At 10 p. m., the window shutters and the windows began to rattle. We stepped into the garden. A short distance from us terrific explosions took place. Flashes could be seen plainly. I looked on in astonish-

ment. General Bell and the chief of staff seemed intensely interested.

"General, I herewith tender my resignation to take effect yesterday."

The general laughed.

But my joke had a rather personal meaning. Shortly before we sailed, an unimportant staff officer was assigned to our division. On boat, the man seemed all the time absent minded and worried. His chief told me that he claimed to be sick. He neither wanted nor needed him.

Early in the morning, this man had sough out the Division surgeon and importuned him to have him examined for discharge. In the afternoon, he hounded me to death to look after his case. Eventually, we let him go. I believe, the man was really below par physically, but, were I to make an exact diagnosis of his case in accord with my conscience, I should have reported him as a case of abnormally low temperature of the lower extremities.

The calm climate of his home state would no doubt produce a better cure than could be expected from woolen socks.

Troubles in Billetting

Here in Huppy, I realized that the appointment of a number of officers as billeting officers, who knew no more French thar to ask: "Madam, a vve wu in shamber?" (the phonetic for their manner of pronunciation and (meaning: Madam have you room?), was a farce pure and simple. Whenever they had to arrange for something, whenever a difficulty arose, they had to ask some busy officer who knew French to do their work for them.

The Division surgeon could not get an office. This house was closed, owner and keys gone; that house contained valuables—the caretaker had no authority, etc. I accompanied the billeting officer to the major and demanded the use of a certain house.

"Impossible, Monsieur!"

I tried persuasion, diplomacy; to no avail. I lost my patience.

"I do not know what sort of Frenchman you are," I burst out, addressing the uncrowned czar of the village, "but I'll find out by telegraphing to the ministry of war in Paris."

Keys suddenly appeared. Later I told one of the French officers of my experience. He replied that the people had suffered much, were distrustful, etc.

"Then why did Marshal Joffre ask our Government to send troops quickly?" I replied with heat. "We have come for a purpose which should throw everything wide open."

I told our office force to be careful with the furnishings. I recollect that I moved my desk away from where it was placed near a glass door, as a glass panel was broken. The cook (we ran an officer's mess in a room in the building) took some wood from the yard.

Imagine my surpise when, a few days later, the caretaker came up to me (the soldiers having referred him to me) demanding enormous sums for wood and the broken window. I told that man that he was a fraud and a grafter and that I would bring him before a military tribunal; and he almost broke down. Thus I saved our damage adjusters much labor and trouble.

Effects of Bombing

The combatant troops of the Division were placed in small groups in and near villages throughout the area assigned to us. Communication with them was maintained by motor-cycle messengers, through whom they forwarded routine reports. Troops were marched and drilled daily on all roads of the area, but there was no facility for maneuvers on a large scale. We had to report to headquarters daily for instructions. A few days after our arrival, I received permission to go to Abbéville on the pretense of needing some equipment. I visited the city and was astonished to see an entire city block of stores shot to pieces as if an earthquake had crumbled in the walls.

The German air raiders, who attacked the city nightly, had tried again and again to blow up the railroad station and the tracks, but all they succeeded in doing was, to raze the buildings opposite the station. In the heart of the city there is a small cathedral and across the narrow street a public school for girls. A bomb was thrown into this street, producing a tremendous hole which was already covered up; but one could see that the shell splinters had gone through even the cast-iron rain pipes of the building, producing irregular holes of all sizes, much as we see wounds in man. All windows had been shattered and pieces of the church wall had fallen to the ground. In spite of this wreckage, no one had been hurt. In a stable nearby, a large number of horses were killed.

Near Abbéville is a depot in which many service girls were employed. A few evenings before my arrival, the alarm was sounded and some twelve girls rushed into a trench. All of them were killed.

At the Gas School

The very next day, we were to go to St. Valery and spend the entire day in a British gas school. All staff officers, including the commanding general and officers from another division, arrived in automobiles. If I remember correctly, the program was to begin at 10:00 a. m. The lecture room was in a loft over a barn. The lecturer's platform was equipped with all sorts of paraphernalia.

lectures which I had heard and read ad

An officer began to tell us all about gas—nauseam. His rather theatrical method of delivery, his studied pauses and gestures amused me; but eventually the heat overcame me and, pretending to look at notes, I gradually passed into slumberland. Suddenly a sensation of terror overcame me—it was a siren manipulated by the lecturer to demonstrate alarm methods.

The next lecture on gas defense brought out nothing new to us and we adjourned for lunch in the open church-yard, our tables being the newspaper in which we had wrapped our sandwiches.

During the afternoon, we walked some distance to a special field devoted to the training of the enlisted men in gas attack and defense. First, there was the usual passing through gas houses where lachrymal gas was liberated. Then we were ordered into a house filled with toxic gases —this time with gas masks on. Mine did not fit very well and I asked an instructor whether it was safe. He looked at it and said, "Yes," so I went in. I raised the mask to get a moment's effect of the gas, but beyond a slight odor I felt nothing. The gas was evidently too diluted to be harmful.

In the field, all sorts of maneuvers were performed for our instruction. Races and athletics with the gas masks on, the liberation of gas from tanks, the alarm, the putting on of masks, and remaining in the clouds; all these things served to impress on us the need of one thing: to put on the mask within a few seconds. British and American soldiers with gas masks on were stretched out on the ground firing at targets. This concluded the day and we returned to Huppy in time for supper.

Reducing Officers' Baggage

The next day, an order came out directing us to reduce our baggage to the field minimum of fifty pounds. Officers of field rank had four hundred pounds baggage containing many things for a winter campaign and, now, there was not enough allowance for a decent bedding outfit.

Accordingly, there was a good deal of consternation among our officers who felt that, without change of clothing, they would soon appear bedraggled. The whole thing amounted after all to a test of economy and privation. I managed to carry with me, in addition to a bedding roll which weighed nearly a hundred pounds, a portable typewriter and a small box of professional books, but the two latter were sent as office equipment.

I can imagine that officers who have to spend much time in the trenches should carry no more than an enlisted man: namely, blankets and toilet articles. But, for staff officers who live in the rear of the trenches, mostly in billets, a certain amount of professional equipment and comfort is essential to good work.

In the belief that I might have to draw maps, I even carried an engineer's compass, rulers, scales and a complete set of drawing instruments. Higher authority granted exception whenever the need for it was apparent.

Later, at the front, British medical officers told me that the order to carry only fifty pounds of baggage was simply impossible of execution and was not carried out. Those attached to field ambulances carried a complete messing outfit for the officers on one of the trucks, an expedient to which we had resorted on the Mexican Border.

[To be continued]

Neurasthenia, Hysteria, Epilepsy *

With Special Reference to the Study of the Endocrines

By ALBERT A. LOWENTHAL, M. D., Chicago, Illinois

IN TAKING up the study of glandular therapy, or of endocrine therapy, in its relations to nervous and mental diseases, it is well to remember the basic fact that the so-called endocrine glands furnish what has been designated as internal secretions. Internal secretions are substances that are produced by certain glandular organs in the body, are passed directly into the blood or lymph channels and stimulate certain nervous and muscular activities. On account of this particular stimulating action, these substances have been designated as hormones. The most commonly known glands with function of internal secretion, or which produce "hormones," are the thyroid, the parathyroids, the suprarenal capsules or adrenals, the pituitary body, the pineal gland, the thymus; also the tonsils, the lymph glands, the spleen and, possibly, some others. Indeed, it has been definitely established that active internal secretions (hormones) may be produced by other organs than those mentioned.

It is an established fact that numerous diseases are due either entirely or partly to the failure of normal chemical processes over which the ductless glands have an essential control. Through this failure, associated functions are interfered with and disease results.

While the basic scientific studies concerning the characteristics, the functions and the diseases of hormone-producing organs were done by such men as Sajous, Bandler, Schafer, Cushing, Biedl, Gley, Falta, Starling, and many other physiologists and clinicians, it would be unjust to ignore the general practitioner who, as a matter of fact, is accomplishing important scientific research work by the clinical application of glandular extracts, and whose observations as to the actions and the effects of these remedial agents are essential for establishing the correctness of laboratory deductions and, no less, the clinical value of the therapeutic agents.

It may be said in brief that emotions (such as, for instance, mental and sexual excitement), stimulate the pituitary, the thyroid and the adrenals to increased activity. Alcohol, coffee, tea, iodine, arsenic, strychnine also stimulate certain endocrine glands.

Semi-liquid diet, the glycerophosphates, the bromides, narcotics (opium) may cause endocrine function to rest temporarily. Clinically, it has been found that the administration of glandular substance, such as ovarian substance, mammary-gland substance, lymphatic gland, brain and spinal cord substance, frequently act by restoring a disturbed metabolic equilibrium.

It is especially in cases of nervous and mental diseases that various of the endocrine functions are either in abeyance or are definitely disturbed. There is possibly no class of cases in which endocrine, or hormonic, therapy has yielded such striking clinical results as in this class of cases.

Neurasthenia

Neurasthenia may be designated as nerve tire, or fatigue, as an irritable weakness, nervous prostration or nerve exhaustion.

Neurasthenia is observed usually in persons between the ages of eighteen and forty-five. It affects both sexes, although it appears to be more commonly found in females. A neuropathic organism may be transmitted by heredity. As affections contributing to the occurrence of neurasthenia may be named tuberculosis, syphilis, malaria, gout, arthritis, insanity, epilepsy, alcoholism; also intestinal or digestive disorders which are colloquially designated as dyspepsia. Some of the inciting causes in men are worry, anxiety, excitement, overwork, excessive alcoholic indulgences, sexual irregularities, tobacco, opium, overtraining. Inciting causes in females are, menstrual disorders, anxiety, unfortunate love affairs, overstudy, sleeplessness, such as (for instance) that induced in nursing mothers, petty and long-continued domestic annoyances, frequent pregnancies, miscarriages, operations, postsurgical affections, and so forth.

Symptoms.—As a rule, the neurasthenic patient is anxious to be questioned and supplies a fluent and complete history of his case. Commonly, he complains of insomnia, headache (usually on the top of the head or later-

*This is an abstract of a lecture given by Doctor Lowenthal to a large gathering of physicians in the Banquet Hall, Masonic Temple, Chicago, Ill., on December 13, 1921.

ally), fatigue, backache, muscular weakness, twitching of the eyelids, gastrointestinal disturbances, tremors, palpitations, lack of emotional control. There is an increased knee jerk; the patients, especially women, cry easily. Indigestion being a common symptom, the patient often will fast to the degree of starvation.

Because of the fact that these patients drink very little water, the urine is usually scant in amount and highly colored.

Many of the patients complain of impotency or sexual weakness. They feel depressed and disgraced because they believe this condition to be hopeless. Despondency is frequently observed. If nocturnal orgasms occur, they exhaust the patients who waken nervous and tired.

The diagnosis should be fairly easy if several of the enumerated symptoms are present. Hysteria may be associated with neurasthenia, and it can be differentiated from it because of its characteristic convulsions, marked emotional excitement, palsies and complete loss of self control, which are characteristic of hysteria.

As to treatment, neurasthenic patients commonly have been the rounds, as the saying is. They are fully and completely conversant with the old-line treatment. They recognize all the various combinations of valerianates, of asafetida and of other sedatives, and are quite familiar with the tonics customarily prescribed. The consequence is that any attempt to administer a stereotyped or palliative treatment will cause the patient to lose confidence and to add one more to his list of physicians who have "done him no good."

In the opinion of most physicians, neurasthenia is an affection that is very annoying—to the physician. Let them remember that it is even more annoying to the patient and to the patient's family; that, usually, the patient honestly and earnestly desires to get well; that he wishes nothing more fervently than sympathetic and intelligent guidance back to health. A neurasthenic patient who has recovered under the painstaking care of a certain physician is one of the most grateful patients that any physician could wish to have. I wish to urge my colleagues not to take this condition too lightly.

In my opinion, it is best to keep the patient working. Idleness is undoubtedly the devil's most potent means of maintaining and continuing the affliction. In addition to regulating the ordinary physiological functions, ordering the most easily digested and nourishing diet that the patient's power of assimilation can take care of, and in addition to securing suitable elimination—intestinal, renal, cutaneous and respiratory—much and striking good can be effected by wisely-selected combinations of glandular products. These are indicated especially in neurasthenia owing to insufficient sleep, to errors in diet and in exercise. They accomplish much good, also, in neurasthenic conditions with a different etiology.

In all these cases, the entire endocrine system is at fault, and it is necessary to reestablish a metabolic equilibrium.

One of the most important factors in, and conditions for, successful treatment of the neurasthenic patient is, to impress him with your sincere desire to aid him and to guide him back to health. Also, the physician must demonstrate his ability. The patient wants to know that his doctor "knows what he is talking about," and the more seriously the physician takes his duty with regard to such a patient, the more certain he is of succeeding.

It goes without saying that a complete and painstaking physical examination should be made, not only on occasion of the first consultation but from time to time. Of no less importance is an investigation of the patient's psyche, because his condition requires not only physical but also mental treatment. By giving him a wholesome philosophy of life, by teaching him how to look upon his duties, an immense and valuable degree of assistance will be afforded.

A physician who thus impresses his patient, not only with the seriousness of his case (of which he is fully convinced) but of his own (the physician's) understanding and sincere desire to be helpful, will be informed in all seriousness that he is the first physician who understands the case thoroughly. The patient will be sure to obey instructions to the letter. He will "stick" and he will be a conscientious, grateful and well-paying patient for anywhere from six to twelve months. That is the length of time required usually for successful treatment.

A useful questionnaire for the physician's guidance:

1. Are you bothered with your sleep? (Nearly every case sleep is disturbed.)
2. Do you have headaches every day? (This is the most common symptom.)
3. Do you tire very easily? (Fatigue a very common symptom.)
4. Have you pains in the head, back, limbs, etc.? (Patient usually answers that he has

pains any place and every place. Some are less now than they formerly were.)

5. Do your hands tremble or do you feel a tremor any place? (The tremor is usually found in 90 percent.)

6. Test the tendon reflexes. (About this stage of the examination, it rests the patient and he notices that you are extremely interested. You will find the reflexes usually exaggerated.)

7. Inquire about tenderness over the spine. (Patient will state that he has tenderness in nearly every case. He also will complain of vague sensations like heat, cold, prickling, tightness, numbness. May complain of twitching of the eyelids. May even state that he has a leadcap headache.)

8. What foods seem to disturb you? (Patient usually complains he is unable to eat this or that and sometimes reaches a starvation period. You might ask the patient how often he looks at his tongue in the glass to see whether it is properly coated or not.)

9. Do you ever have any trouble in reading and does it give you a headache? (Patient usually complains it is difficult to read because it causes headaches and distresses of the head.)

10. Do noises startle you? (Patient usually disturbed by any noise, even refusing to meet friends or relatives, because the talking and excitement disturb him.)

11. Do you feel your heart palpitate every day? (This is a common symptom, due to digestive disturbances.)

12. Please tell me everything about your sexual life. Date back to your early life. (The average neurasthenic complains of lessened sexual power. If patient has ever masturbated, every symptom is warped by him to relation with supposed impotence. In women, analogous symptoms are encountered, but much less frequently, some of them are troubled by nocturnal orgasms accompanying dreams from which they awake nervous, depressed and exhausted. In married women, sexual appetite may first be increased but quickly diminished and may be followed by an actual distaste and even disgust.

13. Have the urine examined. (Urine is usually high-colored and scanty. Neurasthenics drink very little water.)

14. Do your hands perspire easily? (Neurasthenics usually perspire about the head, neck and hands on slightest effort or embarrassment.)

15. Do you feel despondent at times? (Patient usually makes statement he might as well be dead as in his serious condition, if he thought he would never get better. When you approach this subject, there is a lack of emotional control. The patient will cry easily and you will observe tears many times during examination, especially if patient tells about himself and contemplated dark future.)

16. Inform patient you wish him to keep employed and that he must follow your instructions in regard to treatment. That he must appear at your office two or three times a week for at least six months, and every time he states he is improving in any of his numerous symptoms, record it on his history sheet in his presence.

Hysteria

Hysteria may be classed as a psychroneurosis which may be associated with disturbances of nutrition, trophic and vasomotor disorders of a neurotic character. Hysteria is one of the most common of nervous diseases. It usually appears at puberty and is most common between the ages of twelve and thirty, but may appear as early as the fourth year.

Heredity plays an important part. Hysteria in the mother is very frequently followed by hysteria in the daughter. The following may start off hysteria: great emotional disturbance, fright, mental strain, grief, worry, injuries, surgical wounds, gastric ulcers, nephritic and hepatic colics, alcoholism, tobacco, morphine, cocaine, typhoid, diphtheria, influenza, diabetes, tuberculosis, cancer, and so forth.

Religious meetings under prolonged excitement have a tendency to cause hysteria in various forms. Some religious organizations (dancers and rollers) are of recent times, while St. Vitus caused medieval epidemic dances. Hysteria is a disease of ideas. I have seen hysterical patients mimic all symptoms and physical disabilities of other patients with whom they are kept in contact.

Symptoms: Great emotional fits and acts; may have hysterical anesthesia affecting special senses—taste, smelling, hearing, seeing and feeling.

I remember a case at the asylum where pricking, pinching, hot and cold bodies, even cutting, would produce no response. We find amnesia often present, due to lack of mental concentration; the loss of will power is often present. Hysterical patients may have convulsions similar to epileptics. In hysteria, they seldom bite their tongue or froth at the mouth; they seldom have an aura. The epileptic drops any place, while the hysterical patient usualy finds a bed or a sofa. The pupils do not show dilation in the hysterical case. There are no urine changes in hysteria. The hysterical patient, during convulsion, strikes a crucifix position and often we find him taking passionate attitudes. Globus attacks are common; the patient suddenly complains of ball-like feeling in the throat.

We often find various forms of paralysis in the hysterical patient. Whenever you are called to see a patient between the ages of twelve and twenty who claims to have lost the use of a limb or an arm overnight, or his voice, hearing or sight, you may suspect hysteria. Shell shock is a form of hysteria. The hysterical patients may show rhythmic spasms; they may reach such a degree of emaciation

that they have become living skeletons. They may fear they are getting too fat, or choose this method of suicide. Hunger strikes of recent dates may have been superinduced by hysterical ideas.

It should be easy to distinguish neurasthenia from hysteria. We do not find the highly emotional state in neurasthenia. We do not find the marked mental conditions in neurasthenia. We do not find the areas of anesthesia in islets, so demonstrative in hysteria. The rhythmical spasms are the property of hysteria alone.

As far as treatment is concerned, we must map out our therapy from a physical standpoint. Particular stress must be laid on the importance of each individual case. The patient is looking for sympathy and oftentimes figures that he is a martyr. I have had patients who, fearing they were neglected by their physicians, claimed they were passing urine from their navels or passing fecal matter from under the mammary glands. Many smeared themselves to emphasize their claims, so that the nurse or relative would be alarmed and send for the physician immediately.

Owing to faulty metabolism, the pluriglandular products are indicated. There is no special old-time treatment, so, these poor unfortunate patients are easy prey for Christian Scientists, miracle men, and every known cult. Today, I shall show at least five interesting cases that responded to organotherapeutic treatment. Two were inmates of the insane hospital, and, I might state here, many hysterical patients are sent to the insane hospitals, especially where there is no psychopathic hospital to give the patient a chance for recovery. Once in the insane hospital, they become institutionalized, then mimic the bad patients and are usually classified with the worst patients, with little chance to be helped.

Epilepsy

Etiology.—Heredity plays a very important part in the causation of epilepsy. The antecedents' history will ofttimes show syphilis, alcoholism, insanity, phthisis, rheumatism, intermarriage. Epilepsy may appear frequently in succeeding generations and may descend directly from parents to children. But, in my experience, I found it more likely to be indirectly propagated by way of collateral branches. Epilepsy may occur at any age. If epileptic seizures occur after thirty, you way suspect organic brain trouble, usually due to specific trouble. After fifty, we encounter degenerations of senility. We may consider many inciting causes, usually epochs of development unequal to the shocks of ordinary life and demands of growth. There is a faulty metabolism of the endocrine glands that control development. Postmortem reports show in nearly every case the principal organs of internal secretion involved, especially the thyroid gland. Toxic agents also may cause epilepsy, such as lead, tobacco, alcohol, chloroform, ether, morphine, cocaine. Toxic conditions arising from intestinal tract, defective elimination from the kidneys, head injuries, early intercourse, masturbation, eyestrain, reflex irritations due to nasal growths, menstrual disturbances, childbirth, may incite epileptic attacks.

Symptoms: Most pronounced are the attacks, seizures or fits, either *petit mal* or *grand mal.* Most epileptic patients have an aura, or premonition of an attack. It may be a few moments, several hours, or sometimes days before convulsion. The most common is a feeling arising from the stomach. Some complain of tingling sensations, twitching of eyelids, face or extremities; some may complain of ringing in the ears, some have peculiar sensations of the tongue or in the nose. There may be disturbance of smell. Some have genital excitement, mental stimulation or depression. I had a patient who would sing at the top of her voice before a seizure. In most cases of Jacksonian epilepsy, the patients have a sensation in the extremities, as they describe it, a crawling toward the brain. Then they have a seizure. Some patients have a seizure without an aura and drop at any time.

Petit-mal attacks may be termed fractional attacks and may present an endless variety of acts of the patient. There is usually momentary loss of consciousness. The patient may suddenly turn pale and the eyes become fixed and look vacant. Whatever the patient is doing, is interrupted. If talking, he will continue conversation, after the attack, where he left off, as though nothing had happened; if at the table, he may drop fork or cup; if combing, he may drop his comb; sometimes saliva dribbles from the mouth. The patient sometimes starts to disrobe or runs for a few moments in an unconscious way. The *petit-mal* attack may run into a *grand-mal* attack and fall, the fit presenting the tonic convulsion, then clonic and then in a period of sleep. The *grand-mal* attacks are usually preceded by an aura. The fit comes on suddenly. Consciousness and sensibility are instantly lost and the patient falls. The tonic stage opens suddenly with nearly all of the muscles of the body showing tetanic rigidity. This causes the patient to be thrown down violently at times.

TABLE OF DIFFERENTIAL SYMPTOMS OF EPILEPTIC AND HYSTERICAL ATTACKS

	Epilepsy	Hysteria
Prodromes.	Mental or physical premonitions.	Emotional disturbance.
Aura.	Common, but momentary.	Uncommon and of considerable duration.
Onset.	Sudden, complete; cry, fall, rigidity.	Gradual.
Consciousness.	Instantly lost.	Partially lost or retained.
Course of convulsion.	Tonic, clonic, and stertorous stages.	Epileptoid and emotional phase.
Duration.	Two to five minutes.	A few minutes to several hours.
Positions.	Governed by flexors, mainly.	Tendency to extension; arc de cercle. opisthotonos, crucifixation attitude.
Eyes.	Pupils dilated and rigid.	Pupils mobile and active.
Tongue.	Usually bitten.	Bitten very exceptionally.
Mouth.	Frothing common.	Frothing absent.
Sphincters.	Relaxed usually.	Usually continent.
Pulse.	Accelerated greatly and tension increased.	Rate and tension not much changed.
Temperature.	Elevated 1° or 2° F.	Normal.
Termination.	Gradual.	Rather prompt ending and little discomfort.
Urine.	Increased nitrogenous and phosphatic elements and toxicity.	Urea reduced, phosphates decreased and changed phosphatic formula; often large quantity, but of low specific gravity.

The fixation of the muscular grasp of the thoracic cage and laryngeal apparatus give rise to a cry, more like an expiratory, guttural noise. The face at first is pale, but rapidly becomes congested and cyanotic, the pupils are dilated. The tonic periods last about three minutes. The tongue is held tightly between the teeth and nearly always lacerated. In this stage, owing to spasm of abdominal muscles, the contents of the bladder and even the rectum may be expelled. The clonic period follows the tonic stage. The muscles relax and suddenly contract. The jaws grind together, churning the saliva in the month and throat and forcing a bloody foam through the lips and teeth. This stage lasts usually about five minutes and terminates in full relaxation. The body and face is covered with perspiration.

The period of Stertor.—The patient is still unconscious and usually in stertorous breathing. He lies quietly, just as the convulsions left him. After an hour or more, he opens his eyes and regains partial control of himself.

In many cases, the seizures happen at night; the patient then may gradually merge into natural sleep and may be entirely unconscious of the occurrence of the fit. Usually, the fit leaves patient more or less confused, sore and tired for hours and sometimes days. Sometimes, one fit follows another. We term this *status epilepticus*. Often, patients die during these attacks.

We also have masked or post-epileptic seizures where patients show homicidal tendencies during a seizure and are totally ignorant of what has taken place—sometimes even committing murder. I recall a case of this kind in which I appeared as expert. Some of our world leaders were epileptics. Cæsar, Napoleon, several kings, and one of our recent popes were epileptics.

The old-line treatment consists mainly in the use of some forms of bromides. This treatment in my estimation is brutal, although patients may go for months without fits under large doses of bromides. We always find a loss of mental and physical activity in these patients.

Recent postmortem examinations revealed the fact that, in nearly every case, there had been deterioration of the thyroid-gland structure. For the past twenty years, I have worked on the theory of faulty endocrine system in epilepsy. I have experimented with all of the pluriglandular combinations and finally elaborated the following treatment for epilepsy: First, I obviate any underlying cause, then I give the treatment proper.

At a recent gathering of medical men, one of our leading alienists read a paper on luminal as a treatment for epilepsy. In the last book of one of our leading teachers on this subject, he suggested thyroid gland. I was one of the earliest users of both of these medicaments, and have given the following combination treatment with best results:

Thyroid gland, one capsule before meals.

Lymph compound, hypodermically, twelve to thirty injections.

Luminal, 1½ grs. at 9 a. m. and 9 p. m.

[Doctor Lowenthal's lecture was illustrated by copious and detailed case reports and also by the presentation of numerous patients, some of whom had been treated successfully for periods ranging from a few weeks to several years, and who showed strikingly the benefit of the glandular therapy administered. Other patients had only just been referred. Their condition was discussed and diagnosed, and suitable treatment was suggested. These patients probably will be presented again at next year's course of lectures.—ED.]

Studies in Endocrinology

The Thyroparathyroid Apparatus and Its Relationship to Modern Medicine

By REGINALD WEILER, B.S., Ph.G., M.D., New York City

[*Concluded from January Issue, page 40.*]

The Thyroid in Mental Deficiency

Hypothyroidia seldom appears in infants below one year of age, because they obtain sufficient thyroid secretion through the maternal milk, so as to make up for the deficiency of their own gland. The earliest symptoms of this condition in infants are an unusual thickening of the neck and the formation of pads of swelling here and there (myxedema). There then appears a general myxedema with the usual symptoms.

Of course, in mental deficiency due to the thyroid, the other ductless glands are involved too; and, when one or the other endocrine organ is the primary seat of the degeneration, the thyroid is also involved through sympathetic action.

Therefore, when idiocy is combined with the typical symptoms of thyroid insufficiency, a good rule is to start treatment with the following, modifying the dose to conditions:

℞ "Tabloid" Thyroid Gland ..... ½ to 2 grs.
"Tabloid" Suprarenal Gland ..... ½ gr.
"Tabloid" Pituitary Gland ..... 1 to 2 grs.
Arsenous Acid .....1/100 to 1/40 gr.
Strychn. Sulph. .....1/100 to 1/40 gr.
Place in a capsule, or powder, and dispense 100 of them.
Sig:—One capsule, or powder, three times daily after meals.

Sajous' Theory of Immunity

Certain toxins, wastes, drugs, vaccines, etc., excite the immunizing center. This center in turn stimulates the thyro-parathyroid apparatus and suprarenal glands, thus causing them to supply the organism with an excess of thyroiodase and adrenoxidase. Metabolism being enhanced in all tissues by these substances, the pancreas secretes an excess of trypsin ferment, while the bone marrow, lymph glands, etc., are stimulated to produce an increased number of leucocytes consisting mainly of finely granular oxyphiles and phagocytes. Now that the blood is stocked with these various substances the following process is awakened:

The throiodase (opsonin) sensitizes and softens the pathogenic agent by attacking and dissolving its phosphorus contents while the adrenoxidase (amboceptor) (1) oxidizes the prepared phosphorus of the nucleoproteid granulations, liberating heat. The activity of the tryptic ferment (plasmatic and phagocytic complement) being correspondingly increased, the pathogenic agent is converted into benign products and eliminated as such.

[1]Amboceptor is a hypothetical, thermostable substance found in the blood-serum after inoculation. It possesses two haptophore groups, viz. a cytophile and a complementophile. Synomyms for this substance are: immune body, reparative, sensitizer, desmon, fixative, fixator, philocytase, receptor of the third order.

The Pituitary Body and Its Relation to Modern Medicine

SITUATED in the base of the brain and lying in the sella turcica, the pituitary body does not weigh more than half a Gram. It is connected with the brain by a funnel-shaped stalk, the *infundibulum*. On account of a natural cleft, which runs across the body

in an oblique plain, it is easy to split it into two portions, an anterior and posterior part.

The posterior part of the gland is composed almost entirely of neuroglia cells and nerve fibers, usually with some hyaline or granular colloid material lying between them, particularly in the neighborhood of the infundibulum.

The posterior lobe, being derived from the diencephalon, is appropriately considered as part of the brain. It is lighter in color (grayish-white) and softer in consistency than the anterior lobe. It is attached to the floor of the third ventricle by means of its stalk, the infundibulum.

The anterior lobe, which constitutes the major part of the entire hypophysis, is kidney-shaped and receives the infundibular process in a hilium-like depression on its posterior surface. It increases in size until about the thirteenth year of age, when it measures in the transverse direction about 12 mm.; in the sagittal about 7 mm.; and in the vertical about 5 mm. The anterior lobe is light grayish-red in color. It is enclosed in a well marked fibro-elastic capsule which forms, even where the two lobes are in contact, a distinct investment. In the anterior part of the lobe, on either side of the mid-line, a condensation of connective tissue marks the position of large blood-vessels. Fine processes extend from the capsule inward and form a delicate network rich in capillaries, the meshes of which are occupied by spherical or cord-like masses of cuboidal or polygonal epithelial cells. The latter are principally of two kinds—the smaller and slightly staining chief cells, from 0.003 to 0.004 mm. in diameter; and the larger and deeply staining chromaphile-cells, from 0.005 to 0.008 mm. in diameter, so called because of their marked affinity for certain dyes. The two varieties of cells are arranged as intravascular anastamosing cords, in which, in a general way, the acidophile cells occupy the periphery and the basophile ones the center. A third variety of cells, clear, large elements, are formed especially in the pars intermedia.[1]

The aggregation of cells, cord-like or spherical in form, are usually without distinct lumen and lie in very close relation to the wide capillary blood vessels that ramify between them, supported by the delicate connective tissue septa. Here and there, however, the epithelium surrounds a lumen which may contain colloid material, thus resembling acini of the thyroid gland. The colloid-containing acini lie chiefly against the posterior lobe in what has been termed the pars intermedia. They are of moderate size, lined with cuboidal epithelium, and are usually normally present, although colloid vesicles may be absent in other parts of the anterior lobe.

[1] Pars intermedia is the broad middle portion of the rhomboid process. Formerly it was called fossa rhomboidea.

Embryology

The anterior lobe of the hypophysis is formed as an outgrowth from the oral diverticulum. The posterior lobe first appears as a ventral evagination from the diencephalon. During the early stages of its development, this lobe is represented as a tubular outgrowth whose walls partake of the general characteristic of the adjacent brain vesicles. Later, the lumen within the lower end of the diverticulum disappears in consequence of thickening and approximation of its walls, a funnel-shaped recess of variable depth within the infundibulum alone remaining.

The anterior lobe is derived from an ectoblatic outgrowth from the primary oral cavity which appears during the fourth week. The cerebral end of this evagination (Rathke's Pouch) soon expands into the hypothogeal pouch which remains connected with the mouth for a considerable time, until the formation of the base of the primitive skull leads to severance of the tubular communication, the hypothogeal *anlange* then lying within the cranium against the lower surface of the interbrain. In very exceptional cases a canal in the sphenoid bone leading from the sella turcica[1] to the base of the skull contains a prolongation of the hypophysis and this represents the condition existing in some animals. During the latter half of the second month, the hypothogeal sac sends tubular outgrowths into the surrounding vascular mesoblastic tissue. Later, these tubules become separated from the main pouch, which later often persist and become surrounded by acini to form the pars intermedia. The tubular outgrowths of other parts of the anterior lobe lose, in a large part, their lumina and become solid cords separated by capillaries. The anterior lobe thus formed becomes pressed against the under surface of the brain-lobe with which it is closely bound.

Physiology

In the following discussion it is our purpose to prove that: *The posterior pituitary is a general nerve center and that it is a co-center*

[1] Sella Turcica (Latin: "Turkish Saddle") is a saddle-like prominence on the upper surface of the sphenoid bone, situated in the middle cranial fossa and dividing it into two halves. The posterior part dorsum sellæ (back of the saddle), is the highest; in the front of this is the pituitary fossa.

of the anterior pituitary in sustaining life.

The Identity of the Lower Brain

Certain centers in the medulla oblongata are only subsidiary centers which receive nervous impulses from the pituitary body by way of the tuber cinereum and other basal structures (see AMERICAN JOURNAL OF CLINICAL MEDICINE, for August, 1921, page 15). Inhibition, as it is generally evolved by physiologists, is a pathological phenomenon, in that it is caused by excessive constriction of the cardiac arterioles, provoked by vasoconstrictors contained in the vagus (pneumogastric) which is stimulated.

The posterior, or neural, lobe presents the anatomic features that suggest a direct communication of it to the cerebrospinal centers. The pituitary body, then, can govern motion through the intermediary of the spinal gray matter.

9.—All functions carried on normally after removal of the brain are caused to cease by removal of the pituitary.

The fact then is assured that the posterior pituitary body is the chief center of the spinal system and, as such, the primary source of excitomotor impulses. It is not only in acromegaly that the typical signs of impaired function of the posterior pituitary appear, but in other diseases directly traceable to the *Adrenal System*:[1] myxedema, cretinism, exophthalmic goiter, and Addison's disease.

The Histology and Physiological Chemistry of the Neurone

Neuroaxons carry impulses away from the cell, while dendrites carry impulses into the cell.

After dogs had been killed by administering morphine, it was determined that the gem-

Relation of the Pituitary Body to other Nerve Centers

Nerve-Center	Olfactory Center	Post. Lobe Pituitary	Bulbo-Spinal Centers
Nerves	Olfactory Nerves	Hypophyseal Nerves	Bulbo-Spinal Nerves
Distribution	Epithelium of Nasal sac	Anterior Pituitary	Buccal, etc., general subcutaneous
Body-Region	Pre-oral (Prostomial)	Oral	Post-oral Brachial General Body

Facts which led Sajous to this conclusion and which have caused me to follow his lead are:

1.—The posterior pituitary body has a phylogenetic history which distinctly identifies it as a part of the entire neural tract.

2.—It presents clearly defined histological characteristics of an active neural organ.

3.—These characteristics extend to the infundibulum, the tuber cinereum, and the floor and sides of the third ventricle.

4.—These structures are continuous with the reticular substance of the tegmental region, the medulla, and the cord.

5.—Various nerve centers are included in the area with which the pituitary is functionally connected.

6.—Electrical stimulation of the exposed pituitary causes an instantaneous rise in the blood-pressure, of over 100 mm. Hg.

7.—Removal of the pituitary causes an immediate great fall of the blood-pressure.

8.—Division of the base of the brain across the path of nerves known to originate in the pituitary body prevents the action of such drugs as antipyrin, which lowers the temperature; and also the action of pus and other septic material which causes fever.

mules had entirely disappeared from the dendrites. The retraction of the gemmules was due to the general vasoconstriction of all arterioles including those vessels of the adrenals, by the direct action of the morphine upon the sympathetic system centers. Varicosity of the dendrite coincides with a fatigued condition. Retraction of the gemmules is accompanied by varicosity. Experiments performed on fatigued animals and morphinized animals showed the same condition of the dendrities, so that we can conclude that fatigue and large doses of morphine must produce similar results. These results tend to show that the cause of retraction of the gemmules and the appearance of varicosities is due to poor nutrition. Under the influence of certain poisons and during sleep, the blood supply to the brain is reduced and it is at these times that the dendrites exhibit these changes (retraction of the gemmules and appearance of varicosities).

In all living organisms, energy is derived, for the greater part, from the assimilated food. The neurones are never absolutely at rest. Periods of extravagant activity may alternate

[1] By *Adrenal System*, we mean the chain of the pituitary, thyroparathyroid apparatus, and the adrenals, working as an entity.

with periods of more economic changes, but total rest is incompatible with the continuance of existence. There is a constant passage of impulse to and from the cell, and the impulses are sometimes increased and at times diminished; but at all times there is a connection between cells, etc., by means of impulses. The source of this energy is the posterior pituitary. It is the only part of the brain capable of acting the part just assigned to it; so that, if we can arrive at a center of activity in no other way, we can by deduction.

Chemistry of the Nerves

The true functions of myelin, or the white substance of Schwann, a substance which surrounds the axis-cylinder, is practically unknown. About one-half of the dried nerve substance is composed of cholesterin. This substance is an alcohol; but, like glycerine, it forms compounds with fatty-acids. Another constituent of the white substance of Schwann is a complex fat, rather less than half of which is composed of lecithin. Lecithin contains a fatty-acid radicle (stearic, oleic, or palmitic acid) associated with glycero-phosphates and still further rendered complex by its combination with neurin, an ammonia compound. Therefore, though this substance is a fat, it contains both nitrogen and phosphorus. The formulæ for these substances (all containing oxygen) are:

Cholesterin .....$C_{26} H_{44} O$
Lecithin .....$C_{44} H_{90} N PO_9$
Neurin .....$C_5 H_{15} NO_2$

In lecithin, we have an agent capable, by its molecular composition, of acting as a strong source of working energy when oxidized by an oxidizing agent. Cholesterin would seem to be the main waste product of nerve metabolism. Stains (silver salts in particular) are capable of penetrating the nodes of Ranvier;[1] so, we are led to believe that these nodes allow blood plasma to filter through them and thus bring oxidizing substance in immediate contact with the axis-cylinder. Between the axis-cylinder and Ranvier's nodes, there is only a very delicate layer of protoplasm, Manthiner's sheath, which would not hinder the entrance of fluids into the axis-cylinder. In the sheath of the axis-cylinder, there is a system of hollow canals which convey the blood-plasma with its oxidizing material to the myelin which it can then penetrate. A similar action then goes on here as goes on in the muscle fibers. Therefore, the myelin, or white substance of Schwann, when in contact with the oxidizing substance of the blood-plasma, undergoes a reaction in which chemical energy is liberated.

Summarizing our complete conception of the use and functions of myelin we have:

1.—Myelin, or the white substance of Schwann, is to the nerve structure what myosinogen is to the muscle fibre—its imminent source of energy.

2.—The axis cylinder and the canaliculi derived therefrom are made up of fibrils that serve as channels for blood-plasma.

3.—A part of this blood-plasma penetrates into the axis-cylinder through Ranvier's nodes.

4.—Lecithin, a substance composed mainly of hydrocarbons and phosphorus, the active constituent of myelin, when exposed to the action of the oxidizing substance, liberates energy—nervous energy. Thus the axis-cylinder is able, through the presence of its coat of myelin and its plasma-containing fibrils, not only to supply nervous energy, but to undergo nutritional metabolism.

A neurone is directly connected to the circulation by one or more of its dendrites, which serve as channels for blood-plasma. Poisons capable of causing congestion of the cerebrospinal and other nervous tissues do so by raising the blood-pressure and by driving adrenoxidase-laden plasma into the neuroglia and neurons. The socalled neuro-fibrils are, then, in reality blood-plasma channels.

Lecithin is the functional ground substance of the cell-body of the neurone, just as it is of the nerve. Both, in the neurone and its processes, the nerve and the vascular fibrils carry blood-plasma. This substance, by passing through the cell-walls, maintains a continuous reaction, of which the phosphorus contained in lecithin and the oxygen of the blood are the main reagents; the reaction resulting in the liberation of chemical energy. All the parts of a neurone, cell-body, dendrites, and axis-cylinder are channels for adrenoxidase-laden blood-plasma. I, therefore, agree with Sajous when he maintains that the entire nervous system is built upon the same plan: fibrils containing blood-plasma, surrounded by a layer of myelin. The main constituents of these bodies, the oxygen of the plasma and the phosphorus of the myelin, are thus brought into contact and nervous energy is liberated.

[*To be continued.*]

[1] Ranvier's nodes are constrictions occurring at more or less regular intervals in the medullary substance of the nerve fibers.

Surgical Seminar

Conducted by Gustavus M. Blech, M. D.

Cystitis

(Concluded from the February issue, p. 127.)

NOT every case of temporary polyuria is cystitis. I recall that, in November 1916, when I brought back my field hospital from the warm southern camp near the Mexican border to a camp in Springfield, Illinois, arriving in the midst of a blizzard, all of us had to run to the toilet almost every half hour, and, even then, while the bladder was completely empty, there still was a slight uneasiness, almost as if within a very few minutes the act of micturition would have to be repeated.

I was then forty-six years old and, naturally, began to think of prostatic hypertrophy. But, when a much younger colleague expressed to me the same fears, I burst out laughing. It was the weather,—and inquiry will show that, at this season, many have to get up, even during the night, as they are awakened by a feeling of slight discomfort in the bladder. This is a vasomotor unrest that requires no treatment.

Of greater importance is the differentiation of the various forms of polyuria due to diabetes insipidus and to chronic nephritis. There should be no difficulty in arriving at a diagnosis of either condition, since the low specific gravity in the former and the chemical and microscopic findings in the latter, taken together with the clinical histories, can leave no doubt as to the true character of the affections. Neither of the diseases, by the way, are characterized by the painful micturition that is so typical of cystitis.

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In this connection, I ask your indulgence for a few moments to say a very few words with reference to the socalled neuroses of the bladder, some of which may simulate cystitis. I could fill pages with the symptomatology alone, but this would be going beyond the scope of the subject, and I only mention this form for the sake of completeness of our discussion.

You and I have had occasion to note the influence of the mind on the function of the bladder. Fright, worry, nay, even exhilaration, alcohol, tobacco and certain foods, all play a role with regard to micturition. Now, how much more may one expect from hysterics and neurasthenics? Really, life is too short and paper too expensive to even attempt to narrate here the many nuances and variations of bladder phenomena complained of by these patients.

I am particularly interested in neurasthenia. A few days ago, I spoke to Dr. Achard, who, on one or two occasions, prescribed for me for an affection variously diagnosed as enteritis, intestinal toxemia, tobacco toxemia and, finally, as an old, non-active duodenal ulcer. I have been ill for nearly six months and, always having been in splendid health and having lived without the least regard to hygienic principles, I suddenly found myself in the clutches of an affection which reduced my bodily weight by thirty pounds, making nearly a wreck of me. I could not imagine that any toxemia can hang on like a leech in spite of drastic measures; yet, at least one prominent and really great physician dismissed me with the damnable diagnosis of neurosis and neurasthenia. I have hated that term ever since, at least as it is applied in an indiscriminate manner.

Dr. Achard has asked me to write up my experience from the standpoint of the patient, and I may do so after a while; but, meanwhile, I desire to call your attention to the great need of care in diagnosing organic diseases as purely nervous, and vice versa.

With the more serious bladder phenomena of really nervous origin, that is to say, due to organic disease of the brain and spinal cord, I am not here concerned, nor is this the occasion to discuss enuresis which is not always and not altogether a nervous disturbance.

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Let us now take up another exercise as

Case 3.—A man, a peddler, about forty-three years old, a native of Syria. Gonococcal urethritis of a severe type when a young man, probably between the eighteenth and twentieth year of his life, of which he was "cured", by an apothecary in his native land, with what I believe to have been injections of tannic acid and red wine. Malaria at twenty-five, while visiting Aleppo, which got well under quinine

treatment administered by a French physician. No other diseases since. Married and the father of two healthy children, aged twelve and nine respectively. A heavy smoker (cigarettes), an abstainer from alcoholic drinks. He comes to me with the following history.

For the past two months, he has frequently pains in the bladder radiating towards the penis and, when the pain occurs, he is forced to urinate, which greatly interferes with his business, as this often finds him in the street. In consequence, he suffers greatly until he can get to a saloon to relieve himself. Of late, the pain has been felt also in the rectum. He sleeps well and is never awakened during the night. Sundays, when he does not go out, he rests a good deal and then his bladder symptoms subside very much. He has noticed blood in the urine very frequently.

He has been treated by a physician in his neighborhood, for some time, and noticed no improvement. There can be no doubt that his physician had diagnosed cystitis; for, the patient tells me that he gave him powders and irrigated his bladder. The patient showed me the powders and, without calling on the pharmacist for a copy of the prescription, I know that they contain salol and sodium bicarbonate.

The day before calling on me, he had an experience which frightened him. In the midst of micturition, the stream ceased and all efforts to empty the bladder failed. The more he pressed, the worse the pain. He fell down in the toilet, exhausted. A friend helped him up, and then he managed to empty the bladder without trouble. Another countryman, who was operated on by me, brought him to me and acted as an interpreter.

The urine passed in my office showed a typical cystitis, some pus and blood cells, alkaline reaction, ammoniacal odor, and containing amorphous deposits.

What causes this man's cystitis?

Has he a prostatic hypertrophy? No. He never has to get up nights; and that is not typical of prostatic hypertrophy. Of course, the fact, that he had an acute gonococcal urethritis in his youth, could be (theoretically) accepted as favoring the diagnosis of prostatic hypertrophy, but it requires more evidence than the history supplies for such an assumption. If all men who had gonorrhea in their youth or early manhood were to have prostatic hypertrophy, what a rich field there would be for urologic and even general surgeons! Rectal examination with reference to the prostate proved entirely negative.

Now, with reference to tuberculosis. The symptoms, especially the pain and the tenesmus and even the bleeding, suggest it very strongly. It is not likely, however, because of the urinary findings. In the short time that the man has been afflicted, I would not expect the urine to be so turbid, foul, alkaline, in bladder tuberculosis, as I have already pointed out in the case of the young stenographer (Febr. issue, p. 126). While the man looked far from being in perfect health, he did not impress me as tuberculous, although, like most men of Oriental origin, he was lithe in build. No tubercle bacilli were found in the centrifuged and stained sediment. That, in itself, would not rule out tuberculosis of the bladder. If we wanted to make sure of that, in the absence of bacilli in the urine, we would have to resort to other measures, such as the injection of the urine into the peritoneal cavity of guinea pigs. I diagnosed that case almost the moment the urinary analysis was completed, holding back my decision only to make sure by cystoscopy.

One more thing had to be considered as a possibility namely, tumor of the bladder. The hemorrhage would speak for one; possibly, a papilloma of the benign type. Indeed, when you have a case of bleeding from the bladder, you must always think of papilloma or other tumor.

I excluded this tentatively. Why? Because, but yesterday, this man had an experience which to me had pathognomic significance—the sudden retention of urine during the very act of micturition. I said to myself that that was not a simple spasm as we find in neuroses or even in strictures or in hypertrophies of the prostate, but an obstruction pure and simple, and that obstruction could come from a crude physical cause only. As long as the prostata was not hypertrophied and no tumor was present, there was left only the consideration of *calculus*. The man's nativity, his history of absence of symptoms during the night and the hours of rest made this diagnosis the most rational and most probable.

Now, let us make sure. His bladder is comparatively empty. I injected a very mild solution—I think I used a weak solution of boric acid—and, when he expelled the fluid, it still was somewhat turbid. I washed out several times until the bladder expelled the fluid macroscopically clean. Then I injected some more fluid and gently introduced the cystoscope. I saw two large stones which I judged to be phosphatic in character.

These were removed by suprapubic cystot-

omy a few days later. I saw this patient since my return from France, about two years ago, and he tells me that he has been entirely free from trouble—six years after the operation was done.

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Now a word as to the operation. Having preached conservatism, in this journal, ever since I became privileged to write surgical editorials, it may be asked why I performed what has become known as *sectio alta*, or high incision, involving opening of the abdominal wall and bladder, and not the more or less bloodless operation of crushing of the stone (litholapaxy).

The answer is simple. In the first place, I am not a urologist, but a general surgeon. The small hospital with which I was then connected did not possess the expensive apparatus necessary for stone crushing and evacuation of the fragments. And, even if it had possessed the apparatus, I would not have used it, because I had no experience with it—my cases of stone of the bladder being very limited in number—and especially because I had little confidence in my ability to manipulate the crushing instrument without being sure that I would not injure the bladder wall. To do a successful litholapaxy, the urethra must have a wide caliber, the stone or stones must be mobile and easily grasped, all of which I could not have determined with certainty even by cystoscopy.

Besides, I am a firm believer in the principle that a surgeon should never grope in the dark. Whatever the fingers do must be done under the direct guidance of the eye; else, disaster is not always averted with certainty. I have seen too many deaths following "surgery done in the dark," an unexpected adhesion of a growth to a large bloodvessel (to use an illustration) having terminated fatally, when a large incision and careful dissection under visual control would have avoided the calamity. A tear in the bladder wall is not quite so serious a calamity, but a calamity nevertheless, and, in the case of a man who scarcely had the means to pay for two weeks' board in an inexpensive hospital, a bladder fistula, pericystitis, or perchance urinary infiltration, would have spelt a siege of long illness and economic ruin to him and mortification to his surgeon. The mortality of *sectio alta* is very small, if properly performed. Though I have done this operation only six times, I have never had any bad results. Healing has been *per primam*. I think that my reasons for avoiding operative manipulation in the interior of the bladder, through urethral entrance, have been sound.

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Cystitis due to Tumors of the Bladder.—Though not strictly coming within the scope of our study, I feel that a brief discussion of bladder tumors may prove of some value to general practitioners. I base this opinion on two reasons; first, that mistakes in diagnosis are often made, though easily avoided; and, secondly, because, as far as my own limited experience seems to show, the cure of this class of diseases is possible only if appropriate treatment is given promptly. Delays and nonradical measures have no place in bladder tumors; for, here, we confront a surgical problem pure and simple.

I shall not burden you with a discussion of sarcoma, myoma or myxoma of the bladder. I have not seen a single case myself and, therefore, can only repeat what can be found in standard works.

But I have seen quite a number of papilloma and carcinoma cases, and I feel that I can give some sound advice.

Take for illustration *Case 4*. A young man, a government employe, has suffered for some weeks from hemorrhages from the bladder. Sometimes, he would pass a good deal of blood and, sometimes, little. He has not now and has never had any pains during, before or after micturition. In fact, he has no pain whatever but is quite worried about his condition. He has had no venereal history, nor any history that would shed light on his case. A physician had treated him with irrigations and the patient believed that some of the injections checked the bleeding while others did not.

The urine, on passing, showed no turbidity, no shreds, and, with the exception of a slight phosphaturia probably due to the mental strain, nothing abnormal. No diagnosis was then made, the patient being instructed to come back when he passed blood. I had then in mind the possibility of malingering or of neurasthenia.

The patient did not return for some time. When he did come back, he showed me a bottle of urine containing blood. He passed fresh urine and this, too, showed blood.

After the usual washing of the bladder, I cystoscoped the patient; but the attempt failed because the lens became covered with blood. He was too young (about 24) to cause me to assume an hypertrophy of the prostate. While the cystoscope was still *in situ*, I injected more fluid through the instrument until the lens was

freed from the blood, allowing, of course, some of the fluid to escape through the instrument to prevent overdistention of the bladder, and then I beheld near the trigonum the typical picture of a papilloma. There was a "bouquet of flowers on a narrow stem," as plainly as if I had seen it with the naked eye. I referred this patient to a prominent urologist, who confirmed the diagnosis and who gave him several fulgurations with the high-frequency current.

Such an apparatus, to be effective, must not be confounded with the small, portable high-frequency appliances which can be purchased for a few dollars. The apparatus used for the purpose of curing a papilloma is a large and expensive affair. I do not think that treatments of this character should be given by general practitioners. Nor do I think that cases of the kind described call for surgical treatment.

I have seen three such cases. In only one were there symptoms of cystitis and that was doubtless due to manipulations with catheters and sounds on the part of a physician. Under appropriate treatment, the patient got well.

The patient referred to, improved after a few treatments and I lost sight of him during my military service here and abroad. A few months ago, I accidentally encountered him on the street and he tells me that he is now under the care of another specialist and that he has no more hemorrhages but some trouble during micturition. The present attendant is injecting ice-water through an instrument, he tells me. Doubtless, the man, whom I always judged to be afflicted with a neurotic ballast, has a urethral hyperesthesia, for which the new specialist is trying the cold cure.

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Case 5.—A man, tailor by occupation, about fifty-eight years old, married, with a history of typhoid fever about thirty years ago, with no history of venereal disease, is sent to me by his family physician with a diagnosis of "hemorrhagic cystitis." The physician bases his diagnosis on the fact that, while the man has very little pain immediately after micturition, his urine is slightly turbid and contains blood. Asked what treatment he had given him, the physician admitted that he had at first suspected stone and had introduced a stone searcher into the bladder, after which the bleeding appeared more profusely than before.

In this case, I proceeded as described above. The cystoscope showed a papilloma-like growth which seemed to infiltrate the neck of the bladder for a surface of about two square centimeters. The patient stood the cystoscopy so well that I studied the growth for about fifteen minutes. I can assert that I did not see the cauliflower growth typical of cancer; nevertheless, I diagnosed carcinoma and advised radical operation. .

This diagnosis was not confirmed by a urologist who, on the contrary, advised that fulguration treatment should be used. I objected to this, on the ground that in all elderly patients a growth not decidedly appearing to be benign, should be considered malignant and treated accordingly.

Without my knowledge, a third specialist was consulted, who advised the removal of a small piece for histologic study. When I was told of this by the family physician, I advised against this procedure, on the ground that even histology will fail definitely to determine whether the patient had a papilloma or a polypoid carcinoma and that the trauma may do more harm than good.

But, fulguration was tried, nevertheless, at the urgent request of the patient, with the result that the disease progressed rapidly. At this writing, the man is in a precarious condition, already showing metastases. Operation, which might have done much good when I first saw him, is now out of the question.

The lesson of this case is obvious.

"THIS noon, I met with Mr. Hooke who tells me that the dog which was filled with another dog's blood at the college, the other day, is very well and like to be as ever, and doubts not its being found of great use to men."—*"Pepys' Diary," Nov. 16, 1666.*

[*This is, no doubt, one of the earliest reference to blood transfusion.*—ED.]

The General Practitioner

Talks About Professional and Personal Problems

Conducted by WM. RITTENHOUSE, M. D.

Better Mail Service

THE Post Office Department is asking the cooperation of business men to secure prompter delivery of mail. As no class of men is more interested in good mail service than the medical profession, I propose to do my mite of cooperating right here.

Few people realize how greatly quick delivery depends upon the street number being placed on every piece of mail. Some big firms are rather proud of the fact that they are so well known that "Chicago" is all the address needed on their mail. They forget that, among the hundreds of mail clerks, there are many who can not carry in their memories the street numbers of even the largest firms; and, when a letter bears no street number, it is thrown aside "for Directory Service." That means delay.

For some months, I have carried my street number at the end of my signed articles in CLINICAL MEDICINE and, yet, many of my correspondents ignore it, and address my letters to the care of the AMERICAN JOURNAL OF CLINICAL MEDICINE. That means delay, and also extra work for a number of mail clerks who should be doing other work.

Let us follow two letters and see the difference. As I have not walked for seven years, all my communication with the editorial office is either by mail or telephone. I live four miles west of the Main Post Office, and the editorial rooms are six miles north of that building. Now, suppose Dr. A., of Detroit, writes to me, addressing the letter correctly by street number. The railway mail clerk (man No. 1) throws it into the bag for my nearest substation, station D., where the clerk (2) puts it into the box of my postman (3) who delivers it at my door. Three handlings.

But, suppose it is addressed in care of the AMERICAN JOURNAL OF CLINICAL MEDICINE. The railway mail clerk (1) does not know in what part of the city that is, so he throws it into the bag for the Main P. O. There the distributing clerk (2), seeing no number, throws it aside "for Directory Service." The Directory clerk (3) looks it up (slow work) and pencils the street number of the A. J. C. M. upon it; then it goes back to the distributing clerk (4) who throws it into the bag for substation R. There the clerk (5) puts it into the postman's box (6) who delivers it to the editorial rooms. There a clerk (7) looks up my address, pencils it on the envelope, and puts it into the "out mail." The collector (8) takes it back to Station R. where a clerk (9) puts it into the bag for Main P. O. A clerk (10) throws it into the bag for Station D. where another (11) puts it into the box for my postman (12) who at last delivers it.

Twelve handlings against three—two or, perhaps, three days' time against a few hours—all because the writer thought "it doesn't make any difference." The post office authorities say that the service could be improved almost one hundred percent, without increasing the pay roll, if every one would be careful about addressing mail. Let's go!

On Reading.

C. M. D. writes:—I am a young and not very busy practitioner, and have plenty of time for reading; so, I want to read something besides medical literature. I never had much chance to read general literature and do not know very well how to go about it. Of course, I could read the books of the day, but I have an idea that I ought to know something about English literature of the past. Can you give me a hint as to how to begin, what authors to read, and how to understand what I read?

Answer.—You are right in thinking that you ought to read something besides the publications of the day. Most of them are not worth your time, and, even if they were, you can not afford to neglect the splendid writings of the past. Every intelligent man, and especially every physician, ought to know something of

English literature and also something of history—Henry Ford to the contrary notwithstanding. The English classics are simply the best that English and American writers have produced—things so good that the world is not willing to let them die. The giddy and lightheaded youth of today are inclined to smile at the classical authors as *passé*, out of date; but, believe me that the judgment of sound-thinking men and women is not to be despised. If the world has preserved the writings of Chaucer, or Shakespeare, or Longfellow, it is because they were worth preserving.

I understand your perplexity; I passed through it myself. I was a farmer's son, and the library of our home was limited to a few religious books and a little dictionary about the size of a Second Reader. That this dictionary was not exactly a fountain of knowledge, may be guessed by the experience I had when I tried to get light upon a word that I found in the Bible. It was the word "foreskin." When I asked father what it meant he dodged; gave me an evasive answer. So I went to the dictionary. I found, "foreskin, the prepuce." Then I looked up "prepuce" and found it defined as "the foreskin." I concluded that the road to knowledge was a rocky one, or else went round in a circle.

However, I was fortunate in having, for five winters (we worked on the farm in summer), a teacher who was a truly cultivated man. The very first winter, he tried to persuade the School Board to get an unabridged dictionary for the school, but they couldn't see any good in it. So he set us to work to get up an entertainment, which was such a success that with the proceeds he was able to purchase a *Worcester's Unabridged*. What a treasure house it was to us! The next winter he persuaded the parents of the district to allow him to start a class in Rhetoric; and it took *some* persuading. The good old farmers could see no use in "the new fangled notions". He obtained for each of the older pupils a copy of Quackenbos' *Rhetoric*, and, how often I have blessed that old book! It opened a new world to us. We devoured the quotations from the great writers with the utmost eagerness and hungered for more. We learned how to appreciate them, to pick out and admire their beauties. Yet, when at last I saved up enough money, by selling wild berries and chestnuts, and by helping some neighbor plant corn, to buy a copy of Shakespeare's plays, I was a little disappointed; he seemed to be over my head. In my perplexity I went to my teacher, and he asked me what plays I had tried to read. I named *Henry the Eighth*, (possibly because his having had six wives made me feel a special interest in him and admire his courage), also *Julius Cæsar* and *Coriolanus*. He said: "You try *The Comedy of Errors* first. Read it rather rapidly the first time, without spending too much time on what you don't understand, but getting a general view of the whole story. Then begin again; take a hundred lines or so; read them carefully six times, looking up everything you do not understand in dictionary, atlas, or history. Be especially on the lookout for passages that seem to you fine, striking, or well expressed. By the time you have finished the play in this manner, you will begin to have confidence in yourself, and you will find it growing in interest. Then follow it up with, say, *Macbeth*, *Hamlet*, *As You Like It*, and *King Lear*; after that you will need no advice." I followed his suggestions and, from that day to this, Shakespeare has been to me a well of inexhaustible pleasure.

There are several points in my old teacher's advice that I wish to emphasize. Repetition is one. It is one of the characteristics of a classic that, the oftener you read it, the more you can see in it. There is no more reason why you should read a good book only once, than there is that you should visit your friend only once. When I was reading for my university course, *Macbeth* was on the list for literature. I counted up how many weeks I had until examination and found that, if I took fifty lines of the play for study each week, I would just get through in time. So I read over the first fifty lines every day for a week, looking up every possible reference, studying obscure passages, admiring fine ones and, so to speak, steeping myself in them. That kind of "digging" is not only very valuable but very delightful work. The result was not only that I was able to pass a good examination, but to this day there are none of Shakespeare's plays that I can pick up and dig into with quite so much pleasure as *Macbeth*. The thorough study did it.

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Another point is the use of the dictionary. Every family should possess as good a one as they can afford. An *Unabridged Standard* or the *Webster* is a treasure in any home, and doubly so where there are children. Not only should it be there, but it should be used constantly. It should be kept handy where it can be referred to without trouble. Get the dictionary habit. I value my *New Standard* above all my other material possessions. It is a

library in itself, a treasure house of good things. It is an understood thing in our home that, in case of fire, the first thing to be carried to a place of safety is the *Standard.* Of course, not every one can spare from twenty to thirty-five dollars for an *Unabridged;* but, fortunately, there are very good substitutes in the way of smaller editions. There is the *Desk Standard* which sells for $2.00 and contains more information than did the big unabridged dictionaries of twenty-five years ago. In its 900 pages it contains brief information on 80,000 words, including the names of noted persons, the names of noted characters in fiction, historical places and events—in fact, an encyclopedia and dictionary combined. If the public only knew how much knowledge $2.00 will buy, there would be a *Desk Standard* in every home.

There is a good deal to learn about how to use a dictionary, but I shall leave that to a future article.

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Another thing that is too often neglected in reading, is the use of the Atlas. Geography is one of the sciences that helps to broaden the mind, and one of the most interesting. The late war did much to spread a knowledge of geography, but there is still great room for improvement. Every doctor ought to be a subscriber to the *National Geographic Magazine,* which is a very wonderful publication at a very moderate price. One trouble with both, dictionary and atlas, in many homes is that they are not kept in a convenient place but are frequently buried under a pile of other books where it is too much trouble to dig them out. It pays to have a stand or table on purpose for them.

Historical references in reading should also be looked up if you want to get the most good out of it. Sometimes this is rather difficult without a large library, but the *New Standard* or *Desk Standard* will help greatly. Write to me if I can help you.

That reminds me that, in history as well as in literature, the last two or three years have brought out inexpensive books of great value to the book lover. For this, much credit is due to the universities.

Professor Breasted of Chicago University has published *Ancient Times,* a volume that gives a bird's-eye view of the development of civilization from its first crude beginning in the valley of the Nile and elsewhere down to the zenith of the Roman Empire's power and glory at the beginning of the Christian era. It is charmingly written with abundant maps and illustrations, and is history from the scientific viewpoint. Professor Robinson of Columbia has done the same thing for medieval and modern history. Few people are aware how great is the difference between the socalled "drum and trumpet" histories of a generation ago and the modern scientific histories. The former were largely devoted to wars and the doings of kings; the latter give more attention to the life of the people, their manners and customs, and their gradual development from a state of barbarism. Especially interesting is the knowledge of primitive man which science has discovered in the last score of years. The life of prehistoric man of fifty thousand years ago, or even longer, has been revealed in a manner as surprising as it is interesting.

Professor Manly of Chicago University has published two books, one of poetry and one of prose, which give extracts from the English classics from Saxon times down to the present. The extracts are long enough to give the reader the opportunity of seeing for himself what authors appeal to his taste. They make it possible to avoid the mistake of buying the works of a given author and then finding that one does not like him.

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There are certain authors that everybody should read. There is but one Shakespeare and one Dickens, and their characters are so often referred to that no one can afford to neglect their acquaintance. Micawber, waiting for something to turn up, the genial Pickwick, the original and witty Sam Weller, the hypocritically humble Uriah Heep have made Dickens' name a household word, and are literary landmarks as truly as are Falstaff and Iago, Rosalind and Juliet, Desdemona and Lady Macbeth. So, Shakespeare and Dickens will keep you busy for quite a while. If you want a change, read Scott's "Lady of the Lake," Pope's "Essay on Man" (said to be the most quoted poem in the world), at least one book of Milton's "Paradise Lost," Longfellow's "Evangeline"—but, there is no end to the list I might suggest. If you get Professor Manly's two books, you will always be able to judge for yourself what authors you want to read.

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There is another point of importance in reading that some readers have not thought of. If you read too long in the same book at the same sitting, the mind becomes sated, so that you do not enjoy what you read with the same keen relish as at first. It is like making a whole meal of a single article of food. Variety promotes relish. Suppose you have an hour to

read: Instead of devoting it all to one book. try giving half an hour to each of two, or, if it is a deep subject, twenty minutes even may be long enough. You will be pleased to see how fresh the mind is in taking up a new subject. I often have six or more books going at once, changing from one to another every half hour. Of course, I have a good deal of leisure; but, even when I was a busy practitioner, besides doing my share in college and club life, I generally managed to keep at least two books going. What you like to do, you can always find time to do.

"But" some reader objects, "I want to read a story faster than that. I want to know how it is coming out." Ah! there you have confessed to a bad habit. To read fast "just to see how it is coming out" is fatal to good reading. Leave that to giddy girls who read novels while mother washes the dishes. Self-control is just as valuable in reading as in any other occupation. In fact, a bit of wisdom that we all would do well to remember, is to never allow ourselves to be hurried, no matter how many things are pressing for attention. It is a saver of time as well as of nerves. If you *must* read fast to see how the story is coming out, then read it a second time deliberately enough to get the real value of the book. If the second reading does not interest you, you had better ask yourself whether the fault is in the author or in you; for, either he is shallow, or else you have spoiled your taste by reading for the story only.

The Use of "into."

C. H. writes: "Is this sentence correct? I found it in Dickens. 'He appreciates the honor of taking Lady Dedlock into dinner.'"

Answer: No, "into" should be written as two words in this sentence. It was probably the blunder of a compositor or proof-reader; for, Dickens was strictly correct in his English. They went *into* the dining-room, but not *into* dinner. The dinner went into them.

New Year's Resolutions.

The fact, that the reading matter in a monthly magazine has to be written about two months before it reaches the reader is sometimes inconvenient because it is not favorable to timeliness. Here are some New Years' resolutions that are so good that they will not lose their flavor even by the first of March. They appeared in the *Orange Judd Farmer.*

"How is this suggestion for a resolution to be adopted by everybody this year?

"Resolved, that in the year 1922 I will think things out.

"That I will be wise enough to withhold judgment until I have all of the facts, and that I will be sure the facts are genuine.

"That I will not permit my solid judgment to be swayed by my personal feelings, and that I will spurn every effort of self-seekers to gain my favor by attempting to arouse my prejudices.

"That I will do my own thinking, and not permit myself to be stampeded into any opinion by any one on any pretext whatsoever.

"And, so, God giving me courage, I will be a solid American citizen, unafraid, going forward with faith, believing in my country and my fellow men, doing unto others as I would have others do unto me."

Was there ever penned a clearer crystallization of the duty of a free citizen of a free country? Was there ever a time when such a clear and fearless presentation of the truth was as badly needed as now? In our nation, in our state, in our city—but especially the two latter—designing politicians have brought about conditions well-nigh intolerable, simply because our citizens have not done their own thinking, have not withheld judgment till they had all the facts, and have allowed self-seekers to stampede them by appealing to their prejudices. It is a notorious fact that the promoters of the Sheppard-Towner maternity bill in Congress boasted that they had abundant votes pledged to pass it by legislators who had not heard both sides. But, it is not the legislators alone who are guilty of such a breach of trust. How many voters keep an open mind up to the day of election, anxious to hear the facts on *both* sides? Echo answers, "There ain't no sich animile."

What is Home?

Ellis Parker Butler suggests that it is something that you put the cat out of before you go to bed.

Let me suggest that it is the place where you come, out of humor from the day's worries, look over the table, and say, "Godlemitey, what a supper!"

2920 Warren Ave

Good Medicine

Let us learn as we go, but not forget what we know

Conducted by GEORGE H. CANDLER, M. D.

Juggle or Jugulate?

THOUGH, offhand, this may sound about as rational as "How many wrinkles in a prune?" the three words really convey a very definite idea. Elaborated somewhat—but not festooned with quasi-scientific fol-de-rols—they mean, shall we juggle with certain disease processes or jugulate them? The dictionary defines *juggle* as "to deceive by trick or artifice; to cheat." To *jugulate* (dictionary again) means "to cut the jugular vein— or the throat of" something. Naturally, when one "cuts the throat" of something, he ends its existence, jugulates it then and there. And, when dealing with Disease, this is a termination devoutly to be wished. When one juggles with it, however, he usually cheats not only himself but the patient—indeed, everyone but the undertaker, who refuses to be obfuscated.

Naturally, of course, at this particular point, several serenely scintillating scientists will arise and scornfully remark, "You cannot jugulate a disease; if you do kill it in its infancy, how, poor foolish man, are you ever going to definitely demonstrate the fact that you had such a disease to deal with?" And, with lowered head and subdued voice, I salaam and answer: "I expected this, alas! and, without doubt, you must be correct, for wisdom abideth in your tents. Still, as far as I am concerned, I'd rather demonstrate with living witnesses than with an imposing list of case reports, a great number of which end with the ominous words, 'died on the —nth day.'"

Now, it may be most uncouth of me to advance such crude ideas, but I do very firmly believe that in many cases we can jugulate an oncoming disease and so save the patient much suffering and expense, perhaps even his translation to another world. At the same time, we acquire merit—and save ourselves from paying Uncle Sam too much income tax. This is deplorable, of course, but one gets used to it.

My belief, moreover, is founded upon facts and these are stubborn things to controvert. As the busy years have passed, I and my close colleagues have seen numberless cases of pneumonia in the incipient stages, treated along rational lines, get well in a few days; while other individuals in the same locality and presenting precisely the same symptoms, but not treated rationally, ran the classical course and slowly recovered or "were translated." Also, I have received not scores but hundreds of reports from practicians throughout the country relating similar experiences, and it seems to me that, if Doctor Jones, practicing a rational therapy, has ten, twenty-five or fifty cases of pneumonia and manages to get eight out of ten of such patients out and about their business in a few days, while Doctor Smith, in the same district, has all his people in bed for weeks—and a very fair percentage in the prone position forever—the one is juggling, while the other jugulates!

It is quite useless (merely juggling again) to say that Jones never had a true pneumonia case and that all of Smith's were the "real thing." Let us be rational enough to admit that many (indeed most) pathological processes in their beginning yield rather readily to proper treatment, and institute such measures while they will avail, regardless of our inability to base a diagnosis upon a classical symptom complex.

If one does not know the pathology and symptomatology of pneumonia, his medical education has certainly been sadly neglected, BUT, if he also does not know enough to recognize the very first symptoms of the disease and intelligently attempt to jugulate it then and there, he is really a medical juggler—cheating his patient of chances he would otherwise have, and himself into the idea that he is practicing Medicine, the "healing art," not *artifice!*

Here, to be sternly concise, let me add that, what has been said regarding pneumonia, applies in a great many other diseases. I will—if still allowed to live and to continue writing

—consider them on some other auspicious occasion.

At the present moment, I am preparing to meet the onrush of eminent internists who demand to know just how one can be simple-minded enough to hope, by the administration of medicines, to destroy the pneumococcus *et al.*, and prevent consolidation from advancing to red and gray hepatization with subsequent resolution, etc., etc., etc.; and the answer is so absurd, you know, that the E. I.'s will become disgusted and go home to put their patients in ice or in hot packs, according to their vintage. Cold and fresh air, *mes amis,* up to '19, but heat if the label is later—or has been changed.

Here is the horrid secret. You *don't* try to destroy the invading microorganisms with drugs. You *don't* try to pervert natural processes; you don't give medicines "for pneumonia" at all, and you most fervently pray—and heartily believe—that you won't have any red or gray hepatization to deal with.

What you do is, treat the conditions then present in the patient himself, necessarily varying your procedure to meet the individual requirements, BUT, in every case securing prompt and thorough elimination of waste and toxic material from the body by every available route —renal, dermal and intestinal; equalizing the circulation (relieving congestion) and stimulating the vital processes to, themselves, meet and overcome the invading bacteria. In addition, you administer certain drugs which exert certain very definite effects, though none of them, of course, must be regarded as "remedies for pneumonia." You see to it, of course, that the patient is placed in a clean bed in a well-ventilated room because you know that oxygen and more oxygen means everything to him. You prohibit everything but hot fluids for twelve hours, and fluid (hot or cold) for another twenty-four. Fully believing, of course, in the beneficence of fever and understanding perfectly all about the location of the thermogenic zone and its function, you still prefer to find your patient with a temperature of 100° F., to having it read 103° F., on the second day; so, you not only give calomel and salines (or other, and perhaps less useful, aperients) but open the pores of the skin with frequent (carefully given) sponge baths, and make quite sure that your purgatives will act by flushing the lower bowel with plenty of warm normal saline solution. Soap suds will serve in a pinch.

If you are beyond the stage of "cautiously reviving the use of drugs" (I hope you are, or you may try acetanilid or even aspirin here) you will give your patient—and in dose according to age—aconitine, digitalin and veratrine, not every three or four hours but every half or one hour, and maintain that procedure till the temperature falls materially, then less often and as necessary to maintain effect. If pleuritic pains exist, alternate with bryonin. Every three hours, you will administer quinine, grs. 2; camphor, grs. 2; capsicum, gr. 1-16. If you are fortunate enough to have been called as soon as the patient had the initial chill (it is not *always* distinct), begin with this combination and hot beverages and withhold the defervescent triad until the temperature rises. And, from the first, apply to the entire thorax guaiacol and methyl salicylate in a lanum and petrolatum base. Do NOT apply heavy dressings or "pneumonia jackets"; a thin layer of cotton is sufficient for all purposes. Don't be anxious about the nutrition of your patient for that first twenty-four hours, unless, of course, he be very much below par from age or other causes, and even then pin your trust to warm milk with lime water added. Where asthenia is marked, in the very old or (*raræ aves,* now) in alcoholic subjects, give camphor more freely and substitute strychnine for veratrine in the triad.

Proceed along this basal line, using your own good medical sense to meet such peculiar conditions as may arise, and you will find that in the great majority of cases it is possible to jugulate pneumonia—and that by very simple, though strictly scientific, measures. By the same token, if you have to deal with an advanced pneumonic process, you will find an equally simple therapeutic procedure surprisingly effective. You will be better equipped perhaps to give the patient what he has a right to expect if you familiarize yourself fully with the *action* of such drugs as bryonia, asclepias, veratrine, aconitine, digitalin and strychnine—which latter, after all, really *does* exert an appreciable therapeutic effect.

Iodized calcium is also worth your earnest consideration in this connection and, personally, I would very much dislike, without it, to treat a patient with or "threatened with" pneumonia.

It is, I trust, obvious even to the "higher intellects," for whom I have the most profound and undying admiration, that this is not a paper on *the treatment of pneumonia,* or anything of that kind. Far be it from me to attempt such an onerous task! It is merely a feeble attempt to answer the original question,

"Juggle or Jugulate—Which shall we do?" Now, having read and marked—What will You do?

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Because it affords food for thought and an opportunity to use diagnostic acumen, the subjoined case history is submitted with the request that our readers attempt to answer the question: What caused death? The writer has, in direct correspondence, ventured an opinion and is anxious to find out whether or no his diagnosis will be sustained. The firm conviction that she would die, expressed by the patient (and her family), from the first, is of particular interest.

"On December 30, 1921, at six o'clock a. m., was called in haste to Mrs. C—, a very light-colored Negro woman of about thirty-five. She had three healthy boys; had had miscarriages and one or two still-born babes, within a few years. She had menstruated normally in October, but had flowed moderately for three weeks in November. She had seemed unusually well and happy during the holidays. She was up and in her usual health at five o'clock, but was taken with a chill and pains and aching of the shoulders and hips, and she seemed certain that she would not live. She had never borne pain well. She was much darker than usual. Had just begun a moderate flow; bowels moved four times during the day; urine was free; tongue fairly clean: pulse a little quick, but regular; respiration normal. The fundus uteri could not be mapped out because of a very fat abdomen. The cervix softened and the os dilated to admit one finger by afternoon; pains continued regular, about every five minutes. She was given "echafolta" and intestinal antiseptic tablets, alternating every hour. She had a vaginal douche of two quarts of water and a teaspoon of sodium bicarbonate twice during the day and also one hyoscine-morphine-cactin tablet. During the night, after the passing of clots (which were not saved, as I had directed any clots to be), I am informed that regular pains ceased. The patient slept some, but the feeling of impending death was so strong that her former physician, who had moved to the city, was sent for and I found him with her on my arrival. She was much darker, almost black. The whites of her eyes were muddy and very dark. She complained of her throat and was restless and slightly confused. The bowels, for the fifth time the second day, moved shortly after noon and she helped herself up, sitting up while Dr. H— went over her chest with the stethoscope. He reported the lungs clear; the heart beats were regular but quick. The temperature was 101° plus. The os he found open to freely admit the finger, and the uterus apparently empty. The odor left on the finger was ammoniacal. While we were talking over the case, she called out to Dr. H— in her usual voice several times. He suggested an examination of the urine, which was reported less free and more difficult to void than the day before. I spoke to her about it and she answered "yes." While I was arranging for a clean vessel, Dr. H— stepped to the foot of her bed and said, "She is gone." For a moment, there was a rattle in the throat but she was dead. What caused her death?"

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A correspondent, commenting upon the fact that some physicians are keeping measurements of pregnant women and, when they think the abdomen is of proper size, induce labor, asks: "How is it possible to so determine when a woman has arrived at full time for delivery when some have two gallons of water in the amniotic sac and others only a few spoonfuls?"

Of course, it is not possible to determine by measurements alone, as the abdomen of one pregnant female will necessarily be much larger than that of another at the same period of gestation; however, the basal idea is more or less correct. It is, however, a very serious question, in this writer's mind at least, whether or no it is desirable, save in very rare instances, to induce labor, merely because, according to the calculation of the patient or because of abdominal conditions, it is believed that term has arrived.

In the article by Dr. Hugh J. Savage, which appeared in the September (1921) issue of CLINICAL MEDICINE, he states that, menstruation having become regularly established in the young girl, a cycle is created, the constant repetition of which produces a subconscious tissue-memory, or habit, which is periodically recognized by the tissues in a disposition to muscular action. This recognition occurs every twenty-eight days during the entire sexual life of the woman, and is potential, existing at the same point in each cycle at which point menstruation occurs in the non-pregnant uterus. In the pregnant uterus, the potential factor is not lost but is present at the normal cycle point, wherefore any exaggeration of this disposition results in miscarriage or abortion until the tenth cycle point, when labor occurs. Labor is initiated upon the same day upon which the female would have menstruated, had she not been pregnant.

Savage also states that hollow muscles in the body admit of distention to a certain point; which having been reached, the muscle is stimulated to contraction to expel the contents of the cavity. Personally, we do not think much of this argument as advanced, for the simple reason that the distention of the uterus is not always carried to the certain point which would stimulate contraction. That is to say, the same women, with a uterus of exactly the same capacity for distention, may bear a child

weighing only six pounds and the next time a child weighing eleven pounds, and the delivery in each case may occur promptly at term "by the calendar."

The one real object of measuring the abdomen frequently is, to ascertain when the fetus settles. Women themselves are usually aware of this change in their condition and, not infrequently, shortly after become conscious of the socalled false, "nagging," labor pains. Those, who advocate forced delivery at term, consider that the time has now arrived when the uterus should be emptied, but they do not seemingly take into consideration the fact that the soft parts have not been prepared naturally and that laceration of the perineum or other trauma is likely to result from too early interference. Labor pains having set in and it being desirable to deliver the woman, the procedure is, of course, extremely simple and consists essentially of dilatation of the cervix, followed by pressure upon the abdomen, until the presenting part is engaged.

Those who have practiced obstetrics extensively are aware of the fact that manual dilatation of the cervix, even after false pains have set in, may or may not be a simple matter, and a very long time can be spent and a good deal of effort expended before it is possible to insert a third and fourth finger.

In describing his own technic, Savage says: When the head is well engaged and the cervix well dilated, pressure being still exerted on the fundus, an effort is gently made to push the lip of the cervix over the head. Should the cervix remain firm and resist at this point, 1-150 grain of atropine is given by mouth and, after waiting five to ten minutes, another effort is made, with both hands in position, which is usually successful.

"The uterus contracts in a sort of a peristalic wave beginning at the cervix, running up over the fundus and returning again to the cervix. It would therefore seem that the cervix is the logical place to begin mechanical labor. Nature does this very thing in forcing down the presenting part; but, as the actuating force is (to a great extent) gravity, the resulting natural labor is very slow. The only practical difference, therefore, is a difference in leverage.

"The patient should not be asked to bear down at this stage, as the presenting part is acting simply as a wedge to take up the dilatation, while not descending to any appreciable extent. The muscles of the abdomen are therefore useless and would simply act to delay the labor. The main obstruction to the descent of the child (the cervix) being removed, the head drops into the vaginal vault, allowing the abdominal muscles to act effectively in displacing the fetal body downward. The contraction of the abdominal muscles causes the first sharp pain, so that, at this stage, a little chloroform may be given if desired.

"Should the physician wish to stop the pains, for any reason, before the head has passed the cervix, he has only to cease his efforts, whereupon the fetus will withdraw into the uterus and the cervix will contract, after which normal labor pains at long intervals will occur."

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Doctor Dufour, of Bowie, Maryland, states: "A never-failing cure for felon (bone felon) is, to keep the joint of finger covered with gauze or thin cloth saturated with tincture of aconite root. I have not lanced a felon for years. Even after suppuration has set in, I have seen this remedy stop all inflammation and the nail grow out with a large hole in it, and dried pus with it."

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If you now and again give a thought to the present status—and the future—of the medical profession, don't fail to read Bayard Holmes' extraordinarily forceful paper on "Standardized State Medicine and Group Organizations," in *American Medicine* for December 1921. Once in a long while, someone has something worth while to say—and says it without using a muffler. Holmes shoots facts like a machine gun and his phraseology is distinctly Bayardian. You'll like him immensely.

DO NOT believe that a book is good, if in reading it thou dost not become more contented with thy existence, if it does not rouse up in thee most generous feelings.—Lavater.

Let's Talk it Over

Scarlet Fever*

SCARLATINA is the scientific name for scarlet fever, an acute contagious disease, most common in childhood, characterized by sudden onset, with nausea or vomiting, and followed by fever, angina, erythematous rash and desquamation. Holt describes the eruption of a typical case as resembling a boiled lobster. The usual designation is, therefore, descriptive of the disease and the laity are familiar with its cardinal symptoms, so that the physician often arrives after the diagnosis is made.

The Dangerous Mild Case.—Unfortunately, there is a belief amongst the laity that mild cases, which they prefer to call scarlatina, or scarlet rash, are not true scarlet fever and, therefore, the care of a physician and under rigid quarantine is unnecessary. This idea originated years ago with the medical profession and should be universally discouraged and corrected by physicians everywhere, since dangerous and even fatal cases may frequently be traced to mild or atypical, ambulatory and unquarantined cases. Such cases are more of a menace to public health and engender more epidemics than those of severe type which are usually rigidly quarantined.

A family with three children, aged two, five and eight, went on a visit into a neighboring state, some years ago. On returning, they said that the two older children had suffered a mild scarlet rash which did not amount to anything. A physician was not needed and, therefore, they were able to evade quarantine and their return home was not delayed. The day following their return home, the baby girl was stricken with a severe form of scarlet fever and died in a few days. Another family had three children, aged three, seven and eleven years. The youngest, a little girl contracted severe scarlet fever, with nephritis, and died. The physician in attendance, in seeking for the source of infection, ascertained that one of the boys had vomited one morning, complained of sore throat and remained out of school a couple of days. Later, the older boy complained of nausea and sore throat, but continued in school. A physician was not consulted and, if there was a rash, it was not observed. The youngest child had not been away from home and there had been no visitors in the house. The parents said, the boys were very fond of the small sister. The sicker of the two had remained at home for two days, with her. Undoubtedly, this was scarlet fever and accounts for the typical case.

There are *carriers* that do not have the clinical disease or any symptoms of it. It is also probable that many cases of angina and septic sore throat contain the virus of scarlet fever in mixed infection. This conclusion is reasonable because, in symptomatic scarlet fever, demonstrable known germs are present and are causative of many complications.

Etiology.—Scarlet fever follows the course of other eruptive contagious diseases of childhood, and the virus is therefore considered to be a microorganism. The causative factor has been the subject of much research work and varicus investigators have claimed to have discovered it.

Klein was the first investigator whose claim seemed plausible. He called his microorganism streptococcus scarlatinæ. Other workers followed, making claims of finding the specific microorganism. Jamison described a bacillus scarlatinæ. Class found a diplococcus, and Sommerfeldt claimed to find a streptococcus that was the cause. Overton and Deno do not admit in their work that the specific virus has been identified.

Desquamation.—It was believed for many years that the skin and especially the desquamating skin was the source of the contagion. Experiments by English hospital workers, and also in this country, have shown that the scales are not infectious unless contaminated by discharge from the nose or throat or from a suppurating ear. Scaling is profuse upon the hands, especially the palms, and the scales are infected easily when the fingers come in con-

* Read before the Rice County Medical Society, December Meeting, 1921.

tact with the mouth or nose. However, the clearing off of all scales from the skin is still regarded as necessary for recovery and release from quarantine. This is rather fortunate than otherwise, as it allows time for the real areas carrying the infection, the nose and throat, to recover before release. Therefore, it behoves us to assure ourselves that, in a typical case or a suspected case of scarlet fever, the patient is no longer a carrier of the germs in the nose or throat or discharge from an ear or abcess, before giving a release and liberty to mingle with other children in the home and abroad, just as we do in diphtheria. Unfortunately, the specific germ not having been identified, we can not culture swabs from the throats for release as in diphtheria, but we can inspect the infected parts and, by the same line of treatment, with sprays, washes and insisting on ample time in quarantine, eliminate most of the danger to others who are susceptible.

It is probably true that, in some cases where the desquamation is profuse, discharges from the germ-bearing areas cease long before the skin is clear while, on the other hand, discharges may persist from the nose and throat in the mild case or the unrecognized case after the slight desquamation is gone. There is a vast difference in children. Some are prone to take cold and liable to angina and coryza. We can imagine such a child to be not only more susceptible to the disease but also to be a carrier for longer periods. Overton and Deno assert in their text, "The Health Officer," that the disease spreads mostly in this way; namely, from the mild case or the unrecognized case that is at liberty with discharges from the nose and throat that still contain the virus. They believe that the mode of transmission is usually by contact with the disease or a carrier, since the germ is not very long-lived or resistant to adverse conditions, and they say: "Practical experience has abundantly demonstrated that ordinary cleanliness is sufficient to render articles free from scarlet fever germs." However, I still think that the public had best be taught that extraordinary cleanliness is safer.

Exposure, direct and indirect. — Although direct exposure to a scarlet fever patient or a carrier is the most common means of transmission, there are other modes. Milk may be infected from a case in the family of a dairy worker or by a carrier who handles milk at some point between producer and consumer.

It is believed, by some health workers at least, that contagious disease is rarely transmitted by a third person, as for example the doctor or others, making a short visit to a patient and then mingling with other people. It would seem that this is true, otherwise we should expect, with the few precautions observed by many of us in visiting contagious-disease patients, to trace many third-person transmissions. Clothing, utensils or anything soiled with recent discharges from a case or carrier will transmit the disease.

Isolation is of first importance in preventing and controlling epidemics. In some homes, it is possible to isolate effectively and permit workers to continue their vocations while living at home, provided they do not handle foods or are not associated intimately with children, as in the case of teachers.

In other homes, it is utterly impossible to isolate the patient effectively and the rule should be enforced upon the other members of the household, to stay in quarantine or be fumigated out and stay out, the latter only if immune or unlikely to take the disease. Isolation and quarantine become a joke if not carried out in good faith. The physician may give explicit directions and have his patient ideally isolated except that, instead of a trained nurse, the mother is nurse. Some day, the physician calls at an unexpected hour, finds the patient, the family and a few of the neighbors all in one room. In other cases, those supposed to be living away from home go inside when inquiring after the needs of the family. These things have a way of getting around to the doctor or health officer, though, through the neighbors.

Along with isolation and quarantine, as a means of preventing scarlet fever, I think that we should mention *vaccine prophylaxis.* It is true that, until the specific causative germ is identified, we cannot hope to have a specific vaccine for immunization and therapy. However, it is generally conceded that many of the symptoms and complications are caused or exaggerated by known germs. It is also probably true that a child with a healthy nose and throat is protected against scarlet fever just as against diphtheria. Most of the septic and ordinary sore throats are caused by the streptococcus and staphylococcus. Therefore, throat washes and vaccines become important measures of prevention. Vaccines administered to those exposed often prevent the disease or attenuate its severity if it occurs, besides greatly reducing the incidence of the complications, otitis media, nephritis, adenitis and other infections in which streptococcus and staphylococcus play an important role. If a

patient with scarlet fever is isolated promptly, as soon as the disease can be suspicioned or diagnosed, and the exposed members given maximum doses of a streptococcus and staphyloccus vaccine every day or every other day, according to the reaction, there will rarely be more than one case occur and, in the event that other cases develop, they are usually mild, and without complications.

The term isolation needs to be strictly defined. It means isolation once and for all until the termination of the case and until the premises have been fumigated. Then and not until then should the patient mingle with the family. Especially should this rule be enforced if the exposed members are not given immunizing vaccines.

Sympathy too often gets the best of both physicians and laity. An upstairs room is the best for isolation purposes but, whether upstairs or on the ground floor in a one story house, the essential thing is a close-fitting door which shuts this room off from the rest of the house. Unfortunately, homes are rarely built with any thought of isolating contagious cases, even commodious homes may have no inside doors but only wide-open door ways. The question of heating the sick room, the size of the family, the smallness of the house and the lack of understanding and reliability shatter both theories and ideals. One mother asks sympathetically of the physician, "there won't be any danger will there, in allowing the children to go in to see the child just a moment each day? They are so concerned about her and she is so lonesome." What would you say? Often you are not even asked, but the advent of another case and the suspicion in the doctor's attitude often lead to the truth coming out. Often, as soon as the child is apparently well and able to be up, it is allowed to leave the isolation quarters and mingle with the family, though there has been neither fumigation nor release from quarantine. And, over and over, another case is the penalty.

Some time ago, a mother said, when she found that one child had scarlet fever, that she would keep both children in the same room so that the well one might take it promptly, as she wished the quarantine to be as short as possible.

Personally, I adminster vaccine to every exposed case and, even when isolation is impossible, have confidence in its prophylactic virtue. Only once have I observed a second case to develop. Schleissner reported, in the *Journal A. M. A.*, in May 1910, that, in 73 cases of scarlet fever, he was able to cultivate streptococcus from the blood in a large proportion and found streptococcus in the throat nearly in every case even before the throat was sore. Watters, of Boston, reported in February, 1912, in the same Journal, that twenty-one nurses going on duty in scarlet fever wards were immunized with a vaccine made from throat cultures taken from scarlet fever cases. Only one contracted scarlet fever; while of fourteen nurses in the wards, not inoculated, five took the disease. The fact that there are many natural immunes is an insufficient explanation for the difference.

The diagnosis in the typical case presents little difficulty. Vomiting, fever and sore throat should suggest the possibility of the disease. Differential diagnosis must be made between scarlet fever and scarlatinoid erythemas caused by various drugs, ptomains and other disease erythemas. Within the month, in the issue of December 3, just past, of the *Journal A. M. A.*, Levey, of Detroit, and Veeder and Hempleman, of St. Louis, report a series of childhood exanthems, or rashes, which might be mistaken for scarlet fever. Undoubtedly, we sometimes fail to diagnose scarlet fever and at other times the error is on the other side. It is a time-worn statement of health experts that the well and the public should be given the benefit of the doubt, and cases should be isolated on suspicion when a positive diagnosis cannot be made.

Treatment:—The child should be kept in bed in a well ventilated room of even temperature. Small children are hard to keep in bed when not very ill and, if dressed warmly in a room properly heated without drafts, may be allowed to be up part of the time. Complications, especially nephritis, are less prone to develop if attention is given to this matter. Complications are rather more prone to follow mild cases, since less care is taken to avoid exposure and chilling of the surface. Such patients, because of the mildness of the symptoms, are even allowed to be out of doors in chilly air and winds. This is a great mistake.

The diet should be light. Milk in digestible and agreeable form, broths, and soups, without seasoning that may belabor or clog the kidneys, and fruit juices should be relied upon chiefly.

The treatment should be started with a brisk laxative. Calomel and soda, followed with castor oil, are effective, or saline and thereafter salines or phenolphthalein are pleasant for daily evacuations. During the febrile period, a daily, warm sponge-bath, with care not to

chill the surface, is gratifying and necessary, and more often if the temperature ranges above 102°F. If the fever is high, there should be an ice cap to the head and the sponging may be done with cooler water. Alcohol rubs or alcohol added to the sponge water increase radiation and are grateful to sore muscles. During the febrile period, it is well to give a fever mixture of aconite or veratrum with gelsemium and belladonna in spirits of mendererus. It is claimed by certain therapists that belladonna favors the appearance of the rash and, in any eruptive disease, the sooner the rash is frankly out, the better. Salicylates and antipyrin or other coaltar preparation may be given temporarily, with caution against depression, for headache, muscle ache and soreness and to produce rest.

Attention should be given the throat, ears, kidneys and often the eyes. Washes and sprays should be used routinely to disinfect the nose and throat. Congested ears, as evidenced by pain, should be relieved by heat. Syringing the ear with hot antiseptic solution or an atropine solution using as hot as it can be borne and then filling the ear with carbolized glycerine, 3 percent, and applying a hot water bottle or, better, an electric pad to the ear, if used promptly at the onset of this painful and dangerous complication, which is the forerunner of otitis media and mastoiditis, will, we believe, abort the majority of them.

In cases of threatened nephritis, saline purgatives with counterirritation over the kidneys with mustard are required. Sparteine sulphate in large doses every two or three hours is the diuretic of choice. Dr. Geo. Petty, of Memphis, Tenn., established the fact, some years ago that the usual textbook doses are inadequate to get the physiological effect. He gave it in 2-grain doses hypodermically, every two to six hours to an adult.

Last but by no means least, the case will run a much milder course, in my experience, if treatment with a vaccine is begun at once. A maximum dose should be given daily or every other day for three to six days, according to the case. Usually, the dose is too small and at too long intervals to produce results. What is the sense of giving a small dose every seven days to influence acute symptoms, when ordinarily the acute condition would have passed before the second dose? Vaccines, I think, forestall complications, in my experience. They are less frequent and serious.

After the febrile stage, baths with soda water and inunctions of carbolized vasoline or olive oil allay itching and favor desquamation.

J. C. WALKER.

Lyons, Ill.

PNEUMONIA JUGULATED

On December 30 of last year, I was called to Lancaster, O., to see a granddaughter, three years old. Examination disclosed a temperature of 105.4. Lungs clear. Abdomen showed marked tenderness over region of appendix. Called Dr. Coleman who had been in attendance for several days. He examined abdomen and concurred in my diagnosis. Dr. J. J. Silbough was called in and pronounced it a case of acute appendicitis, and advised immediate operation as he feared pus was already present in the abdomen. She was removed to the hospital at Lancaster and operated about 2:30 p. m. that day.

The abdomen did not contain any pus, but there were abundant adhesions that required breaking up in order to properly bring the appendix into the incision for its removal. This done, the wound was closed, the operation requiring but nine minutes. On account of bronchial irritation due to a recent attack of influenza, chloroform was chosen as the anesthetic. The following Sunday, the child developed croupous pleuropneumonia. At 4 p. m., Sunday, 6 granules of aconitine (1/800 gr.) and 6 granules of digitalin, (1/64 gr.) were dissolved in 24 teaspoonfuls of water. Six granules of saccharine were added and teaspoon doses of this mixture were given every fifteen minutes till midnight, then every thirty minutes for twenty-four hours. To this was added 6 tablets of terpin hydrate. (2 grs.) and heroine (1/25 gr.). The cough being persistent and painful, this combination was given at intervals of an hour and a half to two or three hours, serving the double purpose of preventing pain, quieting cough and as an expectorant par excellence. More and better than this, it quieted nervousness and kept the little sufferer asleep and unconscious of her pain and extreme illness. Early Tuesday morning, it appeared that the two alkaloids had conquered the pneumonia. Then the *diad* of aconitine and digitalin were given at hourly intervals. However, the fever again rose from 100° F. (the temperature in the early morning hours) to 102.4 at 10 a. m., when Drs. Coleman and Silbough called on the patient and made their examination. They decided that an extension of the pneumonic process had

taken place. However, without increasing the dosage and by gradually lengthening the intervals, by 2 a. m., Wednesday morning, January 3, the temperature had fallen to 98.4° F. and did not rise above the normal during the prompt and uneventful convalescence.

To recapitulate: Operated for appendicitis, December 30; developed pleuropneumonia, Sunday; suffered extension, Tuesday; normal temperature, Wednesday; wrapped in blanket and removed to her home, Thursday; uneventful convalescence.

Will some of our orthodox friends, who say that pneumonia can not be modified by any form of medication whatsoever and that, being caused by a specific germ, it *must* run its course, tell us what happened here? And—had not the process in some way been cut short and robbed of its terrors, is it not very probable that we should have had a funeral in the family? I neglected to say that the temperature, Sunday p. m. at four o'clock, was 104.8; pulse 130; respiration 50.

I am firmly convinced, from an experience dating from 1898, when I commenced fighting pneumonias with alkaloids given according to dosimetric principles, that a majority of cases seen early have been jugulated and that in all probability my grandchild's life was saved thereby with a minimum of suffering.

J. W. Shook.

Canal Winchester, O.

PNEUMONIA: ITS SPECIFIC TREATMENT

In view of a threatened influenza epidemic with, perhaps, a complication of pneumonia, this winter, the writer wishes to relate his experience during the month of January, 1922, with a child of four years, and with an adult, both pneumonia cases.

Was called in consultation to meet an elderly colleague of old-school training. The first thing he informed me of was, that he did not believe in medicines. The child in question had had measles followed by pneumonia, on account of an exposure to a draft. Two weeks passed by without medication, save for a simple cough mixture, sponge baths, cathartics and local applications, with the doctor in daily attendance. When seen in consultation, the child was in a comatose condition. This was at 1:30 p. m. and, two hours later, the child died without regaining consciousness.

The next case was that of an adult, age 35, fireman by occupation. He had a slight cold and cough for two weeks, for which he used simple home remedies, but he kept on with his work.

When called on January 22, 1922, I found him in bed with a slight, dry cough and pain in the left side of the chest; temperature 99.6, pulse 90, rapid, wiry and small. He received aconitine and bryonin, 1 granule of each in solution every hour. Bowels were looked after with a saline.

During the night, his pains increased and, when seen in the morning, he was expectorating rusty mucus. Pulse was now full and bounding at 110; temperature 103°; tongue broad with a dirty yellow coating on a natural red base. Evening temperature 104°.

The medicine was now changed to meet the altered conditions, as follows: Veratrine and bryonin, 1 granule of each in solution, every half hour, night and day, while awake; also sodium sulphide in 2-grain doses, every two hours. Iodex inunctions to the chest, twice daily, and hot-water bottles applied. Next day, Kali mur. 3x was added to the above, 20 grains in four ounces of water, of which a teaspoonful was given each half hour in alternation with the granules. This medication was continued for five days; only, the intervals were lengthened between doses as the temperature came down and the sputum cleared up. An annoying cough now set in, for which he received Phosphorus, 6x, 3 tablets every three hours. The pulse still being hard and full, the former medication was continued.

On the eighth day, he got out of bed and was free from cough but somewhat weak, for which he received tablets of the arsenates of iron, quinine and strychnine, with nuclein, 2 tablets three times a day after eating. On the eleventh day he was able to be out of doors, and went to work on the fifteenth day or Feb. 6th, just two weeks from the time pneumonia set in.

These cases will illustrate the difference between the expectant, or passive plan of treatment and that of the dynamic or eclectic method with its direct or specific medication. The meeting of symptoms by the latter, as expressed by the invalid, is met immediately by remedies which have a specific influence in controlling the progress of the sickness. The writer is prompted to express his opinion, that pneumonia can be promptly controlled or cut short when seen in the beginning, by an experience covering a period of thirty years. The remedies that were used then to accomplish this result are just as good today as they were then. The symptoms, or conditions, as ex-

pressed by the patient, are the same at the present time as they were then. These symptoms can be met by the same remedies specifically indicated or called for by these disease-expressions, or symptoms, today and will be the same thirty years or more hence, whether it be pneumonia or any other named sickness in which these symptoms prevail.

This experience is in decided contrast with the expectant method of treatment and with those who do not believe in the efficacy of drugs. In this particular, it may be well to quote a familiar quotation: "Where ignorance is bliss, etc."

A. S. TUCHLER.

San Francisco, Calif.

PNEUMONIA: ROUGHING IT vs. THE CODDLING TREATMENT

With Points on Curative Fasting

Two years ago, all the newspapers united in printing the following story:

A soldier was dying from pneumonia on a battleship. The ship was torpedoed and they rushed the patient out into an open boat with scant clothing, the season being mid-winter and bitterly cold. He shivered and shook for several hours until they reached land. Then what? The soldier refused to go to the hospital, for, he said, "I'm all right!" Sure enough, the exposure had effected a complete cure.

Pope Benedict had a "cold," but he was up and about his affairs and refused to go to bed. Still, he finally yielded to his doctor's orders and turned in, and in a few days turned out—dead. He had the prevailing treatment, namely coddling, forced feeding, drugging and injections, which proved fatal as have thousands and thousands of such cases, the whole tendency being, to prevent recovery. If the Pope had been given a reasonable dose of the soldier's "medicine," he would have kept right on living. In corroboration of this, let us consider the case of Secretary of War, Weeks, who, although suffering from a bad "cold," against his better judgment attended a ball-game; a storm came up and he got drenched with rain and was well chilled, with the result that his cold was completely cured. The newspapers printed this as "Secretary Weeks' New Cure for Colds."

Here is a lesson for the medical profession, though it does not follow that victims of influenza and pneumonia need the full limit of the treatment that worked so happily with the soldier and the Congressman. The moral is, don't put a patient who is able to be up and about to bed; and we may well consider the dictum of former Surgeon-General Dale: "If people, when they get sick, would stop eating, they'd get well."

The *Medical Record* (New York) of Feb. 24, 1894 contained an article of mine on "Therapeutic Fasting; Should it be Called Starving? Its employment in Typhoid Fever and All Acute Diseases With High Temperature," in which I have a very large number of examples of speedy convalescence from fasting, in my own practice, together with the experience of several eminent practitioners, all proving the efficacy of therapeutic fasting. Dr. Simon Baruch, a prominent New York physician, who was for years up till his death on the Medical Staff of the Columbia University, wrote asking for reprints of the *Record* Article, and saying: "This Article ought to be printed in big editions and sent broadcast throughout the medical profession as a missionary tract." But, still, today, 28 years later, the practice prevails of forced feeding, appetite or no appetite, and the prevailing abnormal mortality in fevers is the direct result. This needless slaughter means more than forty thousand deaths from pneumonia alone and something like that in "typhoid fever," when fasting from four to eight days from the onset of the attack would secure convalescence; the patient meanwhile taking moderate portions of fresh water according to desire.

CHAS. E. PAGE.

Boston, Mass.

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[While we should not care to send our pneumonia patients on Lake Michigan in an open boat or on a raft, we can not but agree with Doctor Page in so far as his plea is, really, for plenty of fresh, pure air. Pneumonia patients need all the oxygen that they can get into their lungs. To lessen the supply by confining the patients in closed rooms and, worse still, by permitting several people to use up the air in the same rooms, is foolish.

As for Doctor Page's contention that therapeutic fasting is an essential factor for successful treatment, it stands to reason that an organism that needs all its available blood supply for fighting a serious infection has none to spare for the work of digesting a lot of rich food. Quite possibly, physicians permit too much feeding, either through needless fear of debilitating the patient by fasting, or through yielding to the importunities of the family. Doctor Graves' boast, which was to be his

epitaph, that "he fed fevers" was not unqualifiedly a justification of pridèful satisfaction. If the depleting mode of treatment, in vogue at Doctor Graves' time, had not been vitiated by the atrocious degree to which venesection was practiced, the mere withholding food would have been more successful.—Ed.]

"PSEUDOMUMPS"

In the January issue of Clinical Medicine, I noticed an article on "pseudomumps," by Dr. G. H. Wood. I was mighty glad to read this communication, as I have had quite a few of these cases during the month of December, a veritable epidemic, in fact. Being a young practitioner, I did not know what to make out of it. I looked through all my textbooks, which I have not had the time or courage to put away yet, but in vain.

In a small town of 300, in my territory, I had 14 cases. The trouble seems to me to be a contagious, infectious disease. As stated, 14 patients came under my care, although there were many more sufferers in the vicinity; but they relied upon home remedies. The diphtheria fear drove the patients to me. In other towns, I have had in all 3 patients, making a total of 17. The main symptoms have been the swelling of the submaxillary glands, pain more or less severe and increased on moving the head and on swallowing (in one case, the patient was unable to talk), more or less lassitude and malaise, nausea, even vomiting and regurgitation of food. In virtually every case, the patient had to stay in bed from three to twelve days.

The onset was insidious, no marked chills, temperature varied between 99° and 103° in the different cases. Pulse rate was slightly increased. In three instances, I made analysis of the urine, and in two I found a small amount of albumin. In thirteen cases, the condition was unilateral, in one bilateral; in three at first one side then the other was affected. In fifteen cases, it only reached the stage of engorgement; in one, suppuration took place; in twelve cases, only the submaxillary glands were involved; in one case also the sublingual glands and tonsils; in four, it appeared in conjunction with acute tonsillitis.

The age of the patients varied between 3 and 38 years.

Except in one suppurative case, where I had to make several incisions for drainage, my treatment has been medicinal. For local use, I gave the following salve and also let a gargle accompany its use:

℞ Tr. Belladonnae .....½ dr.
Ichthyolis .....40 grs.
Plumbi iodidi .....40 grs.
Ammon. chloridi .....30 grs.
Adipis lanae hydrosi q. s. ad..... 1 oz.
M. et ft ung.
Sig:—Apply locally t.i.d. and cover with flannel.

℞ Tr. Ferri chlor..... 2 drs.
Potass. chlor. ..... 2 drs.
Listerinae ..... 1 oz.
Glycerin .....½ oz.
Aquae q. s. ad..... 6 ozs.
M. Sig:—Use as gargle or mouth wash every hour.

Cracked ice was prescribed in two cases. Internally, I have used about the same medication as Dr. Wood. All my cases went on to recovery; I have not observed any sequelæ, and no patient developed actual parotitis.

This is another very preliminary report and I wish I had been a more mature man and a closer observer.

L. O. Ulving.

Steele, N. Dak.

[Doctor Ulving's report requires no apology. It is concise, orderly, lucid, and complete. His experiences are all the more interesting as actual involvement of the parotid gland was absent in all cases. We hope to hear again from Doctor Ulving.—Ed.]

"PSEUDOMUMPS"

In reference to Dr. Wood's article under the heading given in the title (Jan., p. 64), I had a number of cases somewhat as he describes; but apparently more severe.

There was glandular swelling, malaise, fever up to 103 or 104°F. in some cases but in others lower. The parotid glands were not involved although sometimes, at first glance, it appeared as if they were. This, however, was caused by the edema from the submaxillary glands extending upwards. Still, in all cases it failed to extend under the lobe of the ear. Many physicians reported these cases of "mumps."

The *British Medical Journal* (March 26, 1921) reported a number of similar cases and gave them a definite name, "Glandular Fever."

Glandular Fever is evidently contagious, as I found all the children in the house to be affected one after the other, and it is so reported in the *British Medical Journal*.

Tidy and Morley say, "It may be defined

as an acute infectious disease, principally of children, characterized by rapid enlargement of the cervical glands and by a less constant enlargement of the liver, spleen, axillary, inguinal and other glands. Incubation period five to ten days. Pain and tenderness of the cervical glands may be entirely absent. There is usually some pain on movement of the head. The duration is usually about two weeks, by the end of which time the glands are normal and also the temperature."

In this article, it says, the submaxillary glands are not affected. However, in the cases that I saw the course was typical, still, the maxillary glands were enlarged. So the question remains as to the correctness of my diagnosis, or as to whether the submaxillary glands may share in the infection.

H. G. NYBLETT.

Calgary, Alta., Can.

THAT POCKET CASE

In the December issue of CLINICAL MEDICINE, while making the suggestion that very few drugs are necessary, ordinarily, I happened to mention the fact that my pocket case contained only twelve vials, and that I seldom needed to go outside of those. So many readers wrote to ask for the formulæ contained in the twelve vials, that I promised to give them as soon as space permitted. I have no doubt that many of my readers could devise a better set, but here is the redemption of my promise:

No. 1. ℞ Acetanilid .....gr. 7-10
Caffeine (alkaloid) .....gr. 1-10
Sod. Bicarb. .....gr. 1-5
Saccharin .....gr. 1-100
Ol. Gaultheriæ .....gr. 1-50
M. Ft. Tab. Trit. (one), uncoated.

No. 2. Infants' Corrective
℞ Calomel .....gr. 1-20
Sod. Bicarb. .....gr. 1-2
Pulv. Ipecac.....gr. 1-50
Bism. Subnit.....gr. 1
Saccharin .....gr. 1-100
Ol. Anisi .....m. 1-20
M. Ft. Tab. Trit. (one), uncoated.

No. 3. "Brown Mixture"—the old formula, the equivalent of one teaspoonful.
℞ Pulv. Opii .....gr. 3-100
Acid Benzoic .....gr. 3-100
Camphor .....gr. 3-100
Ol. Anisi .....m. 3-100
Antimon. et Potass, Tartr.gr. 3-200
Ext. Glycyrrhizæ.....gr. 53-80
M. Ft. Compr. Tab. (one), uncoated.
Compr. Tab. Sugar Coated, red or pink.

No. 4. Quin. Sulph. .....gr. 2

No. 5. Calomel .....gr. 1-10
Tab. Trit. uncoated.

No. 6. Strychn. Sulphat.....gr. 1-60
Compr. Tab. Sugar-coated, red.

No. 7. "Children's Tonic"
℞ Ferri Reducti.....gr. 1-10
Quin. Sulphat.....gr. 1-4
Acid Arsenici .....gr. 1-500
Strychn. Sulphat.....gr. 1-500
M. Ft. Compr. Tab. (one) Sugar-coated, pink or lavender.

No. 8. "Constipation"
℞ Aloin .....gr. 1-5
Ext. Belladonn.....gr. 1-8
Strychn. Sulphat.....gr. 1-60
Pulv. Ipecac .....gr. 1-16
M. Ft. Compr. Tab. (one), Chocolate-coated.

No. 9. Phenolphthaleiu .....gr. 1
Sugar and Cinnam. q. s. of each .....grs. 2½
M. Ft. Compr. Tab., uncoated.

No. 10. Bismuth Subnitr. .....gr. 5
Compr. Tab. uncoated.

No. 11. "Digestive"
℞ Pepsin, Sacchar.....gr. 4
Pancreatin, pure .....gr. 1-2
Diastase .....gr. 1-2
Pulv. Aromat.....gr. 1-4
Acid. Lactic.
Acid. Hydrochlor., q. s. of each.
M. Ft. Compr. Tab. (one), uncoated.

No. 12. "Tonsillitis"
℞ Tinct. Aconit.....m. 7-10
Tinct. Belladonn.....m. 3-20
Tinct. Bryoniæ .....m. 1-10
Hydrarg. Iod. Rubr.....gr. 1-100
Sod. Salicyl. .....gr. 1-4
Sugar and Aromatics.....q. s.
M. Ft. Compr. Tab. (one), uncoated.

I keep quite a number of other formulæ in my office. These mentioned in the foregoing were the ones I always had in my pocket, and they were sufficient to begin treatment on almost every case. When I wanted to go outside of this list, I requested that a messenger be sent to the office. Had I been practising in the country where distances are greater, I should probably have had a pocket case holding twice as many formulæ. The No. 7 formula is effective in chorea.

Morphine is not mentioned here because I always carried that in my hypodermic case.

I wish to call attention to the fact that no two of these tablets look alike. If, as often happened, a patient showed me one and wanted "some more of the same," I was never at a loss to recognize it.

I also had the coatings in bright colors, as far as possible, because they appeal to children,

and even to children of larger growth.

I might say that my chief reason for complying with the requests to publish these formulæ is, that I remember well that in the first year or two of my practice I would have given a good deal to have such a list from someone in whom I had confidence.

WM. RITTENHOUSE.
2920 Warren Ave., Chicago, Ill.

AMERICAN MEDICAL AID FOR RUSSIA

I can not but feel that a letter written to his colleagues, by the head of the Public Health Service of Soviet Russia, Dr. M. Semashko, tells its own story of desperate need and courageous effort better than I can do it, and I pray the courtesy of your columns for its wider circulation.

Dr. Semashko asks America for the kind of medical aid which we possess in such peculiar richness—hospital equipment. He has asked this office to furnish a 500-bed hospital for general work, as well as for the care and study of typhus, in the City of Moscow. The needs of that other terrible epidemic front, in the Volga Valley, have been described by Captain Paxton Hibben, Secretary of the Russian Commission of the Near East Relief, who has recently returned from a 5,000 mile journey through Russia. Fifty base hospitals in the Volga Valley would not touch each others' elbows. The United States Congress has just granted twenty million dollars for the relief of Russian distress; it is less well known that the Italian Government, acting in conjunction with the Italian Red Cross, has signed an agreement with the Soviet Representatives to open eighteen medical and food stations in the famine district.

It has seemed to me that we of the American medical profession would respond with a generous and ready hand to the needs of our Russian colleagues, if these were understood. Since 1914, Russia has been cut off from medical books and current medical literature and the professional contacts which are dear to all of us. Her medical men and women, and her scientific workers and laboratory experts, now ask for publications to be distributed to three centers, Moscow University, Petrograd University, and the Academy of Science. They ask for books, original studies, reprints concerning medicine and public health, and files or single issues of scientific medical journals issued since 1914. Gifts of these, or money for their purchase, and gifts for the outfitting of the American hospital in Moscow, will be gratefully received by this office. I personally beg for a generous and immediate response.

MICHAEL MICHAILOVSKY, M. D.
Representative, in America, of the Public Health Service in Russia. New York City.

[It is becoming more and more evident that assistance should be extended to Russia, not only for the sake of her starving and suffering millions who are in no manner responsible for the deplorable conditions existing there, not only for purely humanitarian reasons, but also for reasons of self-interest. Recently we listened to an address given by an American newspaper man who knows Russia well. His story made the Russian problems, and our attitude thereto, appear in an entirely new light. We hope to secure an article on the subject for early publication, for the information of our readers.—ED.]

MORTALITY FROM TUBERCULOSIS

The Department of Commerce, through the Bureau of the Census, announces that nearly 100,000 deaths were due to tuberculosis in the death registration area of the United States in 1920. If the rest of the United States has as many deaths from this cause in proportion to the population, the total number of deaths from tuberculosis in the entire United States, for 1920, was about 122,000, while, for 1919, the number is estimated at 132,000, or 10,000 more than for 1920.

The trend of the tuberculosis death rate is downward. In the registration area of the 33 states which show rates for more than one year, 29 show their lowest rates for the year 1920. The tuberculosis death rate in the registration area in 1920 was 114.2 per 100,000 population against 125.6 per 100,000 population for the year 1919.

To permit better interstate comparisons for the year 1920, adjusted rates based on the standard million population have been calculated. The highest "adjusted" tuberculosis rate for 1920 is 215.7 per 100,000 population for the state of Colorado, and the lowest is 40.8 per 100,000 population for the adjoining state of Utah. The high rate for Colorado is evidence, not of unhealthfulness of climate, but of the attractiveness of the Colorado climate to those afflicted with tuberculosis.

For the states in which at least ten percent of the population was colored, adjusted rates have been calculated separately for the white and colored populations. In this group of states, the highest adjusted tuberculosis rate for the

white population is 137.6 per 100,000 for Kentucky and the highest adjusted rate for the colored population is 354.9 per 100,000 population for the same state. The lowest adjusted tuberculosis rate for the white population is 54.2 for Mississippi and the lowest for the colored population is 175.2 per 100,000 population for Florida.

LET THE GENERAL PRACTITIONER WAKE UP

I had just finished an article, entitled The Soul Sickness, and submitted to the *New Orleans Medical and Surgical Journal*, in which I described a case of soul sickness in a doctor, which was caused by his being falsely accused of violating the antinarcotic law, when my December copy of CLINICAL MEDICINE arrived. I cannot recall ever reading so many honest and to-the-point articles in one journal in all my life.

The above-mentioned doctor had been a real servant to the suffering public for several years before the war and, during the war, he did as faithful a service, at home, as he possibly could have done in France, during the epidemic of influenza; and for very little pay in return. He was not a physically strong man, but I have known him to visit the sick for six weeks, night and day, with less than ten hours sleep in the entire time and, quite often, he was more sick than some of the patients he visited.

During that epidemic, he never forgot two old women that were under his care and who were morphine addicts—absolutely objects of charity. He attended to their needs just as well as to those of his best paying patients, without one dollar's charges. The fact is that they were incurable addicts and he knew that it was sure death for them to withdraw it. He always wrote prescriptions for them; in fact, one of them died during his efforts to cure her.

Finally, a Revenue agent came along seeking some little infractions of the law to make a showing so as to hold his job. And, upon failing to find it, he employed the services of a "dope fence" which, the entire medical profession knows, will lie, steal or murder and unjustly drag a useful man into ruin.

Now, I will leave it to any fair-minded judge to say which has accomplished the most good, a physician like the one mentioned or some Revenue agent that is overanxious to make a showing for his job.

The morphine evils existed, no doubt, but the evils have not been diminished through the existing regulations. And, the fault is not in the doctor. The addicts that doctors cause are practically nil. Most of the cases were caused by the patients being allowed to buy the drug at the drug stores or from smugglers. The greater portion is secured from the smugglers, and that traffic still goes on. If our Revenue officers would spend more time at the real source of the evil and, in place of trying to get a useful citizen into trouble, help him to stay out of trouble, a fellow would be more inspired to obey the laws. This Government of ours is nothing more than a great big father and—is it a wise idea for it to exert such strenuous efforts to find every little fault in us so that it may punish us? Compare the Government with a rude father that slaps his child in the face and knocks it over for the least provocation. Will that child obey? I dare say not. But, rather, it will say, well, what in the h— do I care—I shall get a flogging anyhow.

As was also mentioned in the article on class legislation, for laymen to pass laws on subjects that they know nothing about, except from second-hand knowledge, is unjust to the medical profession. Surely, it is time we were waking up before it is everlastingly too late.

I used to read the appeals to the medical profession on different matters concerning us and say, Oh, that does not concern me, let the other fellow do it. I don't know what to say or do any way. But, my brother, these things do or will affect every one in the medical profession sooner or later. And, they do not stop at that but will affect every one of our patients and, soon, our homes. The most sacred things we possess will be invaded by authorized agents, telling and demanding how our wives must live during pregnancy. However, thank God, here is where Americans will balk. If those social reformers really would like to do some actual good to our country, they would go home and begin having babies of their own.

As far-sighted a man as Senator James A. Reed, of Missouri, should be appreciated and I think it is time that we all were writing to our respective Representatives giving our view of these matters, and urging them to stop and think. I am quite sure, after they do, many of the representatives will see these things as Senator Reed does. Truly, in a land of liberty there can be no interference with an individual to choose his own medical adviser or physician, to prescribe as he sees fit, except in certain cases of quarantined contagious dis-

eases and where prescribing is done for criminal purposes.

Wake up, gentlemen; let's talk this matter over and be up and doing.

OLIVER B. BARRON.

Ferndale, Calif.

NEW REGULATIONS FOR NARCOTIC DRUGS

The Commissioner of Internal Revenue, under date of October 19, has issued instructions to narcotic agents and other officials concerned in the enforcement of the Harrison law, amending the instructions issued July 31, 1919, in regard to the application of the law to the treatment of incurable diseases and drug addicts. Regarding the use of narcotics in the treatment of acute disease, the Commissioner holds that "without reference to the question of addiction, a physician acting in accordance with proper medical practice may prescribe or dispense narcotics for the relief of acute pain or for any acute condition, such as influenza, pneumonia, renal calculi, broken limbs, etc." This practically gives the physician the right to use narcotic drugs for actual disease conditions, in accordance with the recognized usage of the medical profession.

Regarding the use of narcotics in the treatment of incurable diseases, the Commissioner instructs his agents that "a reputable physician directly in charge of bona-fide patients suffering from diseases known to be incurable . . . may . . . strictly for legitimate medical purposes, dispense or prescribe drugs for such disease, provided (1) that the patients are *personally attended by the physician,* (2) that he *regulates the dosage* and (3) *prescribes no quantity greater than that ordinarily recommended by members of his profession* to be sufficient for the proper treatment of the given case." If the patient, through carelessness, secures more narcotics than are necessary, the physician will be held responsible. The prescription must show the date, the full name and address of the patient and describe in indisputable terms the exact nature of the ailment for which issued. It is not lawful, under any circmustances, to place in the hands of an addict, through prescription or otherwise, a sufficient quantity of narcotic drugs to last a week. In incurable, aged, and infirm cases, geographically isolated, the physician may, at his own risk, upon obtaining permission from the narcotic agent in charge of the district, prescribe or dispense a week's supply or more, provided it is placed in the custody of a responsible nurse or attendant. Accurate records must be kept of such prescribing and administration.

Regarding the use of narcotics in the treatment of addicts, mere addiction alone is not regarded as incurable disease. The new instructions divide the addicts into two classes: (a) those suffering from infirmity or old age, who are confirmed addicts of years' standing and who, in the opinion of a reputable physician in charge of the case, require a minimum amount of narcotics in order to sustain life. Such addicts may be treated in the same manner as those suffering from incurable disease. A responsible physician may prescribe or dispense the minimum amount necessary to meet the absolute needs of the patient. The physician will be held responsible for the results. The physician issuing such a prescription must state on the prescription that the patient is aged and infirm, the age of the patient and the fact that the drug is necessary to sustain life; (b) ordinary addicts must be treated in accordance with the experience of the medical profession, which is that ordinary cases yield to proper treatment, that socalled reductive ambulatory treatment is not effective and that any method of treatment which makes no provision for confinement during withdrawal is a failure in the great majority of cases. The bureau will not, under any circumstances, sanction the treatment of addicts where the drugs are placed in the addicts' possession or where the treatment covers more than thirty days or the patient is not confined in a proper institution. If a physician places narcotic drugs in the possession of an unconfined addict, such action will be regarded as showing lack of good faith. Doubtful cases or those not falling within any of these instructions will, upon request, be investigated and special instructions based upon the recommendations of the inspecting officers will be issued.—[From the *Jour. A. M. A.,* Oct. 29, 1921.]

[Physicians should study these instructions carefully. They are sufficiently simple and explicit for practical purposes, and it will save much trouble if they are adhered to strictly. These instructions, be it said, leave ample leeway to the discretion of the physician to enable him to meet all ordinary indications that may call for the administration of narcotic drugs.—ED.]

PURCHASE OF NARCOTICS BY PRACTITIONERS; SALE OF NARCOTICS BY RETAIL DRUGGISTS

In connection with the foregoing article, the one herewith appended is of interest:

Numerous violations of the Harrison Narcotic Law have occurred through failure of practitioners and druggists, in many instances, to observe the fundamental provisions of the Narcotic law relating to the purchase and sale of narcotics.

Practitioners must issue an official narcotic order form, obtainable at this office at a rate of 10 cents per book of ten blanks, when purchasing taxable narcotics for professional use, such order to be issued to a Manufacturer or Wholesale Dealer and not to a retail druggist. The issuance of an order for taxable narcotics to a retail druggist on a practitioner's prescription blank is contrary to the law. A retail druggist may fill no official narcotic orders of registered persons, except a practitioner's order for an aqueous narcotic solution not to exceed 1 ounce at a time.

With the exception of 1 ounce aqueous narcotic solutions which may be sold on narcotic

order forms of practitioners, retail druggists are limited to sales of taxable narcotics to the consumer, and the sale of such drugs must be to the patient or consumer personally in pursuance of a written prescription of a registered practitioner. The patient or consumer must place his signature on the reverse side of the prescription upon receipt of the drugs.

This office holds it to be the duty of a druggist, when receiving a prescription calling for an unusually large quantity of narcotics, to assure himself that the drug is prescribed in good faith as a medicine for the purpose indicated, and if he has reason to suspect that it was written for the purpose of evading the intentions of the law, he should refuse to fill the prescription. Every druggist should know the signature of the reputable, legitimate physicians in his locality, and, should he fill a forged prescription, he would be liable to prosecution.

The provisions of the law and regulations relative to the preparations of narcotic prescriptions are summarized below.

1. Prescription must be written in ink, indelible pencil, or may be typewritten, and may be prepared by the practitioner or by a secretary or agent, but every prescription must be signed personally by the practitioner.
2. Prescriptions must be dated as of and signed on the date when issued and must bear the full name and address of the patient, and the name, address and registry number of the physician.
3. The practitioner should describe on the prescription in indisputable terms the exact nature of the ailment for which the narcotic is intended.

Your observance of the provisions of the law called to your attention is requested.

Respectfully,
JOHN C. CANNON, Collector.
By E. M. OLSON,
Chief, Miscellaneous Tax Division.
Chicago, Ill.

THE VOLSTEAD ACT AGAIN

Your comment (CLIN. MED., Dec., 1921, p. 870) upon the statements of Dr. V. E. Lawrence, relative to 18th Amendment and the Volstead Act, is very fair and reasonable, but very conservative. Personally, I have been a practical abstainer all my life and, throughout my professional life of 38 years, I have, from principle, been positively and unalterably opposed to the use of liquor as a beverage. But, as to the matter of the Volstead Act vs. free whisky, my decision is for the defendant first, last and all the time.

The Volstead Act is a conglomeration of impracticabilities; so far, at least, as it relates to the doctor and, probably, from A to Z, it should meet the united and determined opposition of all liberty-loving doctors and all friends of doctors. Of late, various sorts of bills have been introduced in Congress by small-calibered, notoriety-seeking men aimed at our professional rights from different standpoints.

The degree in which fanatics would deprive us of our liberty was shown by a bill introduced in Congress and providing that we should be tried by a prohibition commissioner in any action brought against us under this Act, thus depriving us of our constitutional right to a trial by jury. The Hon. Harry Howe's masterly defense of the doctors, on that occasion, deserves the lasting gratitude of the entire medical profession. Who is so thoughtless or stupid that he can not understand the intention of those idealistic fanatics and would be satisfied to go about his business in blissful ignorance or lie down in contemptible servility while his liberty is being taken from him!

In my opinion, the present is a most auspicious time to act, for the reason that, in all probability, the Volstead Act will be revised in the near future to prevent its demise. Therefore, we should use every legitimate means within our reach to oppose any restriction in the uses of liquor by us, except that a public record of all the liquor bought or prescribed by us shall be made and kept.

Free wine and beer, which the near future is likely to bring, is the only available remedy having any chance of resuscitating the dying Volstead Act. But, while fighting for our liberty, we should do everything we can to deserve it. We should clean house, if necessary. No doctor should degrade himself by becoming a common and habitual drunkard, or making a business of intentionally selling or prescribing liquor for beverage purposes. He would not only make a criminal of himself but would bring suspicion and disrespect upon his entire profession. A doctor of this sort is out of his natural element and should be in one of the recently and quickly-made professions — those of enforcement and bootlegging. Perhaps he would be suitable for holding a position in both of these at the same time. He, of course, would have to take some chances; for, it is said by close observers that, once in a great while, evidence of incompatibility has been observed—likely due to idiosyncrasy.

Rightly or wrongly, the selling of whisky belongs to a lower stratum of society. We should always keep ourselves above suspicion of this kind. The most certain way to get privileges and respect is, to deserve them.

As to the usefulness of liquor, it must be expected that doctors differ in this respect as they do with regard to other medicines. The

opinion of the doctor who uses it frequently and studies it closely is of vastly more value than the opinion of the doctor who uses it little and studies it less, and every physician should be free to administer alcoholics when, where and in any amount he desires. I have used two medicines successfully, for a quarter of a century, which have been discarded and condemned by hundreds of doctors and by virtually all authors. The opinion of a million men is of no value when opposed to facts. The physician should not be annoyed and his valuable time taken by the endless and unnecessary red tape imposed by the Volstead Act, nor should he whose mind is trained in matters clinical be subject to the humiliation of being dictated to and guided by a man whom he knows to be grossly ignorant of all these things. It fills me with indignation to think of it.

Previous to the drafting of the Volstead Act, its amendments and other recent bills, I believed that, under a reasonable and practical law, prohibition might be enforceable and useful, but recent events have compelled me to reverse my opinion, for the reason that the lawmakers have exhibited unmistakable evidence of fanaticism. In addition to this, it appears that too many of our people in all strata of society like a drink too well and the thirst seems to increase with the aridity of the locality and consequent difficulty of obtaining the drink.

The crux of this whole matter is the question as to whether the making, buying or drinking of liquor is necessarily a moral crime. This has never been proven and likely never will be. Therefore, as civil law is, or should be, based upon moral law, no civil law should deprive a man of the liberty of taking a drink provided that he does not get drunk.

Drunkenness is an ancient and moral crime the etiology of which is mental or moral weakness or both, hereditary or acquired, and the indicated curative remedy is intellectual and moral development. The drunkard is a criminal and should be punished by imprisonment as is done with other criminals. While he is being deprived of his liberty, his children could be fed, clothed and educated with the money now spent to maintain a parasitic army of enforcement agents and the energy of this parasitic army turned into productive channels. Children reared in this way would likely make better citizens than if reared in the environment furnished by a degenerate. Up to date, the Volstead Act has done much more harm than good. The cost of liquor to the country has likely been as great as before, because of the great advance in price, and much of it is so poisonous that greater harm has resulted. The Government has lost millions in revenue. The general disregard for this law has increased criminals by the thousand, but, while the disregard for this law may not be a moral crime, it is certain that it will have the disastrous effect of increasing disregard for all law.

Prohibition seems to be too strong a term for our liberty-loving people. Regulation is more to their liking. Fanatics have already demonstrated that they recognize no limitations in their effort to compel people to do and be good. As it has never been proven that tea, coffee and tobacco are not useless or even that they are harmless, they will likely be the next to be placed under the ban. Even under free whisky, probably more of our people lost their health and lives from excessive eating than from excessive drinking. The regulation of the diet for each individual would come next. It could easily be proven to be useful.

This is not all. One could easily go further into the business of regulating the lives of our people in a way that would do vastly more good than prohibition, to prevent poverty, sickness and crime. It could be proven that at least 75 percent of our people would be benefited by having an economist for a guardian. Poverty with all of its disagreeable results—hunger, sickness, misery, ignorance and crime—would rapidly disappear. The pauper of today would have a bank account tomorrow. Peace, happiness and prosperity, together with social, intellectual and moral advancement, would quickly supervene, which would doubtless result in the inauguration of a "made-in-America" millennium.

But—But, our people have defended their liberty in three bloody wars and have learned to cherish it so much that they are not now likely to surrender it to please idealistic fanatics.

B. CLYNE.

Yale, Mich.

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[We have printed Doctor Clyne's correspondence, in conformity with our invariable habit to give a hearing to both sides in a controversy. Our readers well know that the opinions voiced in this article are diametrically contrary to the convictions of the Editors and to the policies of CLINICAL MEDICINE. We always have stood for prohibition, and we are convinced that a repeal of the Eighteenth Amendment to the Constitution would be a national calamity.

Not but what the business of enforcing this amendment would be facilitated, and prohibition would be made more popular, by certain changes in the Volstead Act. These, it is hoped, will be made in the near future.

However, to our way of thinking, the most important point is this: The making, buying and selling of alcoholic beverages are against the law. No matter what we may think of the law, it is for us to obey it. To do anything else, puts us outside of the pale of the law; makes lawbreakers of us. In view of the fact that the law exists, physicians should do their share in encouraging its enforcement and the general obedience to it. They should discourage the contempt in which this particular law is held: for the reason that such contempt will have serious and far-reaching consequences in other directions.—Ed.]

CANEY CREEK COMMUNITY CENTER

In Clinical Medicine for November, last, (p. 795), we published an appeal in behalf of the mountain people of Kentucky for whom Mrs. Alice Spencer Geddes Lloyd has accomplished so much. The Caney Creek Community Center endeavors to teach these people to help themselves; and, much encouraging progress has been made.

However, for Christmas, the plea went out to prepare for Mrs. Lloyd's charges such Christmas cheer as might be possible. We had the happiness to forward several checks that had been sent to us by our subscribers. Our own office force sent dolls and candy. In acknowledging these various gifts, part of which were intended to establish a Nursing Unit Mrs. Lloyd writes as follows:

"I have a feeling, away down deep in my heart, somewhere, that Doctor Duke may not have written you to thank you for the money you gathered toward the Nursing Unit.

"The doctor is a dearly wonderful and sweet man, but he rides all over these mountains, all day, and often into the night; and it is hard to sit down and write. I have sent word to him again to be sure to let you know that we have turned over the money to him. His headquarters are in another part of the county, you know.

"We are making another drive for the Unit and hope this will be the last we need make.

"I wish you could have been here to see the joy of the children this Christmas. The Caney Creek Community Center appreciates more than I can tell you the wonderful help toward the joy of Christmas that came to these creeks and coves through the kindness of the employes of The Abbott Laboratories and of The American Journal of Clinical Medicine. Just because we had a number of friends like you, we were able to bring the cheer of Christmas to over three thousand mountain boys and girls.

"We packed the toys and dolls and candy onto mules and rode the mules to the little remote "Hill Billy" schools where, in many cases, they had never even seen a Christmas tree. It was pathetic to see the eager joy of the people over the most simple toy.

"I expect to be in Chicago in the spring with three mountain youths, on a lecture trip; and hope then to tell you personally how much we all appreciate your efforts for us. We hope that you will visit us, too, and see for yourself the condition of these four million Americans and their need.

Alice Spencer Geddes Lloyd.

Wayland, Floyd Co., Ky.

GASTRIC AND DUODENAL ULCER
(Diagnosis and Treatment)

Having suffered from a duodenal ulcer myself for a number of years, I was lead into a closer study of the subject of gastric and duodenal ulcer and I can justly say that, in spite of the wonderful work done by various investigators and clinicians in this line, in spite of the diagnostic acumen acquired in the last decade and in spite of the wonderful revelations that x-ray and fluoroscopy brought about in the gastroenterologic field, we are still groping in the dark as to the real cause and mechanism of ulcer formation, and, hence, no uniform, rational, and specific treatment has, as yet, been offered for this common disease.

The dispute between surgeons and internists, as to the best and most advantageous method of treatment, is still unsettled; the surgeons claiming a greater percentage of cures, basing their claims upon statistical data; the internists doing the same. Certain it is that the surgical treatment is not a rational etiological cure of ulcer. At best, it is a mechanical removal of the injured focus, without having any influence upon the etiologic factor that has produced the pathological condition.

The presence of ulcer, be it gastric or duodenal, is an indication that there is a general systemic disturbance, with a local expression in the mucous membrane of the stomach or duodenum. What is the underlying cause

of this disturbance, is hard to determine. A multiplicity of factors has been linked with the production of gastroduodenal ulcer. Bacterial invasion, toxic influences, burns, extrinsic poisons and circulatory disturbances were held accountable for it and the mechanism of its production is, according to Rehfuss,[1] brought about either (1) from infection via the blood stream, (2) by the corrosive action of gastric juice, (3) localized trophic disturbances, (4) general condition of autolysis.

Again, it is Dr. Rehfuss's belief that the gastric secretion is not the primary cause of ulcer production, but it is a great contributing factor to ulcer extension and ulcer chronicity.

The prevalence of gastric or duodenal ulcer is almost universal. It is found in the young and old, affects all classes, beginning with the humble farm laborer and ending with the railroad magnate.

In the case of my own family and others that I had the opportunity to observe, there is such a thing as a *family diathesis* toward ulcer formation. Hereditary tuberculosis plays an important role and gastroduodenal ulcer may be the forerunner of clinical tuberculosis.

The fact that aborigines, who do not make use of hot foods in their diet, are free from ulcers and cancer of the stomach, leads us to believe that there may be also a mechanical, physical, factor responsible for the production of gastric ulcer.

The diagnosis of gastroduodenal ulcer is comparatively easy now, especially so, since the advent of x-ray and fluoroscopic examination. In the Mayo clinic, 95 percent of the diagnoses made in gastric and duodenal ulcer patients, by means of the x-ray and fluoroscopy, have proven to be correct by subsequent operations.

To those, however, who cannot avail themselves of these excellent diagnostic agents, there are some diagnostic features in gastric and duodenal ulcer which are accessible to all physicians for recognition, namely: the *chronicity* of the disease; *periodicity* of *attack* and *pain* with its distinctive time relation to the ingestion of food. If the physician will remember these three salient points in taking the history of the case, and allowing the patient to make his complaint without being prompted and influenced by the examiner's suggestions, the facts mentioned will come to the surface and clinch the diagnosis for him.

Chronic and periodic attacks of pain or distress bearing a definite time relation to food intake are pathognomonic of gastric and duodenal ulcer. Dr. Chas. Gordon Heyd, in a recent number of the *N. Y. State Journal of Medicine*, makes the statements that this characteristic relationship of pain to the time of food intake is found in 88 percent of cases of uncomplicated peptic ulcers.

It is true that other symptoms, such as vomiting, heartburn, eructation of gases, abdominal distention and a sense of fullness after meals, also persistent constipation are very suggestive of the condition, and must not be lost sight of. Together with the characteristic pain symptom, they give us a complete picture of the trouble we are dealing with.

The enumerated symptoms do vary sometimes, all depending upon the location of the ulcer. Thus, we find for instance that vomiting occurs more often in gastric ulcer than in a duodenal one. As a result of this difference, we find that a patient suffering from gastric ulcer is usually emaciated and anemic while the one who suffers from a duodenal ulcer is as a rule well nourished and has a marked appetite. In duodenal ulcer, the patient has learned by experience that eating offers him relief and he is therefore free from the fear of eating which is usually present in gastric ulcer. Besides, duodenal ulcer will flare up at regular intervals, during cold season, in the spring, or fall. Gastric ulcer appears at irregular intervals. Relief of symptoms in duodenal ulcer during the periods of quiescence is complete, while in gastric ulcer there is always present the phenomenon of indigestion.

Mendel[2] points out that in all cases of duodenal ulcer there is a tender spot known as "Mendel's point" found just to the right of the linea alba, midway between the costal arch and the umbilicus.

This spot is the size of half a dollar and painful on the slightest percussion.

No matter how different the symptoms may be in these two conditions, the treatment is the same for both of them as it is in fact applicable also in case of hyperchlorhydria.

Moynihan believes that *persistent hyperchlorhydria* means duodenal ulcer. It is my opinion that recurring hyperchlorhydria is at least a forerunner of either gastric or duodenal ulcer. It is my practice, therefore, to put the patient on an "ulcer treatment" before I make up my

[1] (Rehfuss—*Progressive Medicine*, Dec., 1921., p. 32.)

[2] (Mendel. *Deut. Med. Woch.* April 15, 1920, p. 433.)

mind as to whether I deal with a case of simple hyperchlorhydria, gastric or duodenal ulcer.

Now, by the term, *"ulcer treatment,"* I do not necessarily mean one definite method of treatment that has lately become stereotyped or designated by the narrow and confining terminology of "methods," as though it were possible to treat all patients alike according to a certain cut and ready-made method. The treatment of gastric and duodenal ulcer must be as individual as are the symptoms and manifestations of this disease in each individual case. Lenhartz' methods, Sippy's methods, and various others are not applicable to all cases and the general practitioners should keep this fact in mind.

First of all, these methods are workable only when the patient subjects himself to hospital care, and it is a known fact that the majority of sufferers with gastric and duodenal ulcers enter the hospital only when a long and protracted home treatment has failed to give them relief from their symptoms. We find that by far the greater number of patients will go on for years experiencing pain and discomforts and will not give up their work or seriously apply themselves to the searching of cure or complete riddance of the disease. It is the family physician to whom they go at first, demanding home treatment, which is not an easy matter. Its administration can, however, become an easy task for the home physician, if he will remember to apply and incorporate in his treatment these three cardinal laws:

1. Treat the disease.
2. Treat the symptoms.
3. Treat the patient.

The first law commands us to make a thorough search of the etiologic factor or underlying cause of the disease. Careful examination of teeth, tonsils, nose and throat; in a word, the exclusion of a focal infection is the first requisite.

Secondly, combat anemia. Gastric derangement is always associated with anemia. Of no minor importance is the looking into the habits of the patient as to what food he eats and how he eats it. The rapid eating and swallowing of improperly chewed food, the ingestion of extremely hot or extremely cold food could be held responsible for a great percentage of gastric and duodenal ulcers. The ingestion of condiments, spicy foods and various food relishes has a great deal to do with the destruction of the integrity of the gastric mucosa and should, therefore, be strongly forbidden. The ingestion of fried foods, especially those fried in animal fats, is the curse of the age, for, there cannot be any more destructive protoplasmic irritant than the split products of fats when subjected to a high temperature.

The second stage in the treatment of ulcer is the alleviation of symptoms as they present themselves and for which you are consulted by the patient, the chief of which is pain—not necessarily an acute pain but a dull gnawing pain which, thanks to its dullness, does not interfere entirely with the patient's occupation, yet is sufficient to paralyze one's energy and interfere with one's maximum efficiency. Before we can do this successfully, we must necessarily attack at first the source of pain, and this is easily done when we are able to neutralize the excess of hydrochloric acid, which is usually present, and also prevent the hypermotility of the stomach. The neutralization of HCl can be done in two ways; either by administration of an alkali, or by tying it up with some albuminous food. The lessening of the hypermotility of the stomach is a difficult matter, and many fallacious methods have been suggested.

Most of the methods suggested were based upon the inference we drew from nature's method of cure; namely, rest. Secure the complete rest of the stomach, and regeneration of the mucous cells will set in, was the argument of those clinicians who attempted to cure gastric ulcer by complete withdrawal of food by the oral method and substituting rectal feeding instead. I object to this method, because it is a physiological impossibility to secure complete rest of the stomach by withholding food from it. The stomach musculature is always active and, when empty, it contracts upon itself, as the phenomenon of hunger pain well illustrates.

Hypermotility, in my opinion, is due to the corrosive and irritative action of the gastric juice upon a denudated mucosa, and anything that will neutralize the gastric juice or keep it away from the ulcerated surface will hasten that much the recovery of the injured part. I suggest, therefore, the frequent administration of bland foods, easily digestible and such that are easily combined with HCl. By bland diet, I do not mean milk; for, milk is neither a liquid nor a bland food. It curdles the moment it reaches the stomach; it lodges in the most dependent portions of the stomach; its acid reaction is intensified the longer it stays in the stomach and, besides, being entirely absorbed, it is conducive to constipation which is anyway present in gastric and duo-

denal ulcer. I rather rely upon well cooked and well ground meat which is non-irritating and ties up the hydrochloric acid.

Rest, bodily rest, is essential, but I do not believe that a continuous stay in bed, as practized in the hospital, is necessary for an ambulatory case. The continued prone position assumed in bed interferes with the proper functioning of the stomach, so that food stagnation in the lesser curvature may take place. I do insist, however, that the patient should be at rest during the height of the process of digestion and, even in the ambulatory cases, I advise one to two hours of rest after each meal.

From the foregoing, the reader can easily conclude that the chief medical treatment resolves itself into a dietetic régime; not so ultra-orthodox as suggested by most of our leading gastroenterologists, but rational enough and one that the patient can easily carry out, without considering it a punishment from on high. In fact, I allow a liberal diet as soon as the acute symptoms subside, provided the articles of food used are well cooked, finely divided, and do not contain an excess of salt, pepper or other condiments. My advice to the patients always sounds like this: "You must not eat any salty, peppery, spicy or fried foods; no raw fruits or pastry is allowed. You may eat everything, provided it is cooked and passed through a sieve. Eat slowly, chew the food for a long while. Eat little but frequently. Never allow yourself to go hungry at any time; never go to bed feeling hungry. Rest at least an hour after each meal."

As supplementary medicinal treatment to the dietetic régime, I make use of five drugs:

1. Bismuth subnitrate in combination with equal parts with magnesia usta, sodium sulphate and sodium bicarbonate. One level teaspoonful every four hours after meals.

2. Silver nitrate, gr. ½, in distilled water, half an hour before eating.

3. Atropine in ascending doses, for the lessening of secretion and control of hypermotility.

4. Tincture of iron chloride in ordinary doses, to combat anemia and also as an astringent.

5. Orthoform in 10-grs. doses, as suggested by Rehfuss, as a local anesthetic and anodyne to the gastric mucosa.

The third law in the treatment of gastric diseases commands us to treat the patient himself. That means, the taking of a complete survey of the patient's mental and moral state. It means a close and friendly investigation of the environment in which the patient finds himself. Neurasthenia, despondency, apprehension of the seriousness of his trouble are often not only the obstacles that the physician has to overcome in the treatment of the disease, but may be responsible for the existence of the condition. Under such circumstances, a word of reassurance, proper advice, a change of environment will bring about better results than a ton of bismuth or sodium bicarbonate could do.

I have seen patients with neuropathic tendencies taking an ulcer cure seriously; some submitting to surgery; yet never getting rid of their trouble. For, they have become introspective and apprehensive, and you could actually measure the degree of their moroseness by the increase of acidity of their stomach contents. It is a proven fact that emotional experiences will increase the flow and the acidity of gastric juice which in turn mean the flaring up of the old chronic condition. Put your patient, therefore, in a pleasant frame of mind, sweeten his sour disposition and outlook as you would try to sweeten his sour stomach. A conscientious carrying out of the three laws will secure beneficient results in most cases, with a corresponding number of grateful patients.

Chicago, Ill. B. W. Abramson.

PNEUMONIA JUGULATED

A recent night-telephone call. A woman's voice saying, "Doctor, come quick. My husband has the pneumonia. He is a line-man in telephone service; caught cold in the storm last week; had cough and went to work too soon. He has high fever and it hurts him to cough."

On arriving, I found a very large man; age 35; temperature 104½; pulse full and bounding; face very red; complains of headache and aching all over; dry, hacking cough. He is almost deaf—the result of his fever.

(Permit a digression. One of the most esteemed teachers in medicine in the long ago [himself, a very successful physician] said, "Whenever you have a patient so profoundly affected by fever in early stages as to be very hard of hearing, you must be on your guard, for, this is almost a sure precursor of an early death.")

The face and neck were a dusky red; the tongue coated white with very red edges and a triangular tip. Patient so stupid or comatose as to require my speaking to him the second time before he roused up enough to answer.

History of the case revealed the attack of

cold, complained of severe aching in head and body, painful cough; bowel movement from cathartic, twenty-four hours prior to my visit.

This is the treatment: Follow me closely. We are going to be very busy just now; for, a strong, vigorous man is hearing the Angels calling him; or something to that effect.

First. Twelve (12) 1/6-dr. granules of calomel were laid on the table and I proceeded to give three at a time every two minutes until all were taken. I had the patient crush them between his teeth, swallowing only with saliva. When they were all taken, I had him drink a large teacup of quite warm water in which a heaping tablespoonful of epsom salt had been dissolved. He was directed to swallow this rapidly, taking huge swallows or draughts, to be at once followed with a large glassful of cold water. To avoid the disagreeable taste of salts, the procedure is, to keep the lips firmly closed all the time of drinking both salts and the water. This is a very satisfactory way to take bad-tasting medicine. Do not allow the air to get to the sensitive gustatory nerves, and no bad taste will be present.

As soon as the salts were taken, 1 granule (1/500 gr.) of glonoin (nitroglycerine) was crushed between the teeth. The effect of this is instantaneous and prodigious. It dilates every capillary in the body by reflex action and rapidly breaks up congestion. Its action is fugacious, or temporary, and, in order to hold this dilatation in a more permanent manner, 2 granules of hyoscyamine (1/500 gr.), each one crushed between the teeth and absorbed under the tongue, were administered. This method of medication is almost as rapid in its action as by the hypodermic way. Immediately following this, 3 tablets of phenalgin were crushed between the teeth and swallowed with water. The phenalgin takes care of the headache and combats the fever. In three full glasses of water, I made the following solution: In the first one, I placed 5 drops of tincture bryonia; in the second one, 1 drop of tincture rhus tox.; in the third one, 2 drops of tincture of belladonna. They were to be alternated every twenty minutes; the dose of each was one teaspoonful. The bryonia is for the stitch pain, the short dry cough, the great thirst. The rhus tox. for the restlessness, the pain, the red tongue with the triangular tip. The belladonna for the fever, the redness of face.

I instructed the wife to prepare a sponge bath in this way: Dissolve in a quart of warm water a tablespoonful of epsom salt and apply by sponging to the entire surface of the body from head to heels. Allow this to dry on the body (which it quickly did). In ten minutes, a thorough soap-suds bath was given, washing and rubbing thoroughly. All this time, the patient was between woolen blankets. After the soap bath, the body was carefully rinsed in clear warm water. This procedure was to be repeated every three hours for four times. At the same time, a dose of epsom salt was given. By this treatment, the patient was getting an internal and external bath.

Epsom salt is the sulphate of magnesia. We take into our bodies oxygen and we exhale CO_2 (carbon dioxide). By the process of digestion, we have in the last analysis an excretion of carbon dioxide from or through the pores of the skin. The sweat glands and the ducts, when measured, have an appreciable length. There are so many on an average to every square inch of skin surface. There are 144 square inches in a square foot and the skin of a normal man is fifteen square feet of surface. By a process of arithmetic, we find the skin drainage to be about twenty-eight miles.

The sweat glands are covered with epidermis which lies as do the shafts of a hair imbricated. In a fever, these dry down and serve as a coat of mail holding in the deleterious carbon dioxide. Now, the epsom salt (magnesium sulphate) has a chemical affinity for the CO_2; so, when applied to the skin, it draws off the perspiration. This is what our grandmothers meant when they talked about opening the pores by a sweat bath. So the method is made plain how the patient in a fever gets an internal and an external bath, both removing poison that is helping to make him sick.

No food was allowed. He could drink all the cold water he wanted. If his cough was troublesome, he was allowed to fill his mouth with dry granulated sugar and to swallow it when dissolved by his saliva. Within twenty-four hours, his wife telephoned me that the patient was very much better; bowels had moved several times; his breathing was easy; no fever and no pain.

In this case we had the stage setting and the making of a bad case of pneumonia—a typical case of double pneumonia. The foregoing is about the treatment I have used in these cases for many, many years. I can truthfully say that, for thirty years, I have not had a case of pneumonia go to crisis.

C. S. Cope.

Tacoma, Wash.

What Others are Doing

ALUMINIUM POISONING

Dr. John Spofford (*The Lancet*, June 18, 1921) relates that he was called to see a man, aged forty-six, who was then employed at a firm of metal workers. He was in a state of great exhaustion and suffering from very severe and persistent vomiting The pulse was slow and irregular. The doctor suspected metallic poisoning and, later, sent a specimen of his urine to a laboratory. The report was, that it contained a large amount of aluminium, also of phosphates. The patient said that he had been dipping red-hot metal articles, contained in an aluminium holder, into concentrated nitric acid. Aluminium produces a rather slow intoxication. In this case, it caused loss of memory, tremor, jerking movements and impaired coordination. There was also chronic constipation and incontinence of urine.

THE MODERN TREAMENT OF ACNE

Drs. Bizard and Robut (*Monde Méd.*, Nov. 19, '21) outline in a very detailed manner the modern treatment of acne, the most common skin affection for which the general practitioner first and the dermatologist later are consulted.

They divide their treatment into local and general. For local treatment, they employ (1) chemical agents, such as the sulphur, mercurial and tar preparations commonly used by our own dermatologist; (2) physical agents, such as massage, "filiform" (thread-needle) douches, radiotherapy, high-frequency current, light-therapy and sulphur ionization.

For general treatment, they advise the use of intramuscular injections of sulphur, in doses to 1 to 2 Cc., particularly of the following formula.

Sulphur	8.0
Cholesterin oil	80.0
Eucalyptol	20.0

In these patients, strict attention to the dietary régime is required, all spiced and seasoned foods being interdicted, as also those that are distinctly acid or that have been fermented, even bread. Alkaline drinks should be ordered, and laxatives may be required. In some cases, an existing hypochlorhydria must be corrected.

Regulations of the gastrointestinal functions is called for, by means of massage, the continuous current and cold applications to the abdomen, rather than by the unfortunate method of giving laxatives for the correction of constipation and intestinal stasis. While this is applicable in young people, those in the third decade of life frequently do require treatment for intestinal stasis, which may be given by massive or fractional doses or rhubarb.

3. Opotherapy. The authors usually employ polyglandular preparations, but they advise to follow the rules laid down by our own endocrinologist, Dr. Hollander. The latter claims that, if the patients are pale and anemic, they are suffering from hyperthyroidism, and suprarenalin is indicated in these cases; but, when the acne patients are of the plethoric type, they suffer from hypothyroidism, and the use of thyroid extract is indicated.

4. Vaccine treatment is useful, beginning with a 3-million dose of staphylococcus and acne vaccine, progressively increasing the dose every week up to a 10-million dose.

5. Autohemotherapy consists in withdrawing 20 Cc. of blood from a vein and immediately injecting it into the gluteal muscles. This is done once a week or, as Dr. Rovant advises, every two days.

CANCER, A MUTINY OF BODY CELLS

The study of cancer, a diligent search for its cause and treatment, receives greater universal attention nowadays than any disease which affects mankind. While tuberculosis, leprosy, yellow fever, diphtheria have become practically known disease entities, the phenomenon of carcinosis is comparatively still a terra incognita.

Of the many theories advanced as to the etiology of cancer, the irritation theory

still seems to be the most plausible and most widely accepted one.

It is a well known fact, for instance, that the aborigines and those uncivilized people of today, that do not include hot food in their diet are free from cancer of the stomach, showing that the irritation of the gastric mucosa brought about by ingestion of hot foods may be one factor in the causation of gastric carcinoma in civilized peoples. The other factors may be of constitutional origin.

A recent article by Dr. L. Duncan Bulkley (Repr. *Med. Rec.*, Oct. 1, 1921) brings this point out very clearly, using the graphic description of a mutiny of soldiers against intolerable conditions in camp life as a simile to conditions taking place in the early period of cancer formation within the body.

The soldiers who are, for some reason or other, robbed of what is rightfully due them in order to keep them in good health and spirits, will give an attentive ear to words of mutiny and rebellion which are first uttered by one or two of their company. This spirit of insubordination becomes contagious and, soon, the entire regiment may be running wild and amuck, demanding improvement in the condition of their camp life.

The same occurs with the body cells when, for some reason or other, they become deprived of the essential elements that tend to assure their normal functioning. Mutiny takes place and cancer results.

A question arises then, what are the best means of subduing the mutiny? If conditions are not to be changed in camp life, will the killing of the few rebels bring about discipline in the soldier ranks? If the factors that produced the growth of cancer are not to be removed, will the cutting out of the rebel cells help to check the cancer formation? Of course not.

That explains why surgical treatment has not been so very efficacious and why men like John B. Murphy were very pessimistic about the surgical treatment of cancer. Dr. Bulkley says that it is a fact conceded by many that carcinosis has a constitutional origin, local irritation acting only as an exciting cause, and, when the constitutional origin is sought after and conditions changed early, the local lesions, called cancer, may disappear or remain absent as long as the causative factors are under control.

It is, therefore, Dr. Bulkley's opinion that in the treatment of carcinosis it is the physician's duty to investigate whether there is perfect nutrition, correct action of the organs, normal functioning of the endocrine glands and whether there is a healthy blood stream.

If the cells are found in ideal condition, they have no cause for mutiny.

PEDIATRICS IN THE SMALL CITY

Herbert E. Hall (*Penn. Med. Jour.* Aug. '21, p. 796) complains very bitterly that the general practitioner is slow in handing over his pediatric practice to a pediatric specialist. He traces very correctly the evolution of pediatrics into a distinct specialty and shows that this evolution was, as all evolutions are, a very slow and tedious process. Pediatrics in the United States is only fifty years old, Dr. Hall maintains, and only in large centers where special children hospitals, infant welfare associations, baby clinics, milk stations and kindred agencies exist, does the specialty of pediatrics flourish. In smaller places, however, pediatrics is lagging behind and does not get the support, either of the laity or of the medical profession at large.

No one will venture to dispute the first half of Dr. Hall's contention, that pediatrics is a legitimate and distinct department of general medicine. Wonderful are the strides, that this young branch of medicine has made in the last two decades. Many of the medical triumphs have indeed been achieved in the pediatric field and the decrease in infant mortality is the best proof of the results obtained. We cannot concede for a minute, however, that the general practitioner must be robbed of this part of the practice, which constitutes the lion's share of his income and, besides, where he can make himself most useful.

That does not mean that pediatrics must cease to exist as a specialty. It simply means that it behooves the general practitioner to pay special attention to pediatrics, so that he may become proficient in it more than in any other branch of medicine. A thorough knowledge of pediatric principles will make him a better medical man in general. When a physician learns to treat disease by able recognition of objective signs only, which is after all the main trick in pediatrics, since the child cannot make his complaint known very clearly, he surely will be able to treat disease in adults.

ANTHRAX AS A NON-OCCUPATIONAL DISEASE

Dr. Louis Hannah, of Sylvania, Ga., makes a timely plea and gives a very necessary warning about anthrax becoming a non-occupational disease. In his article of this subject (*Med. Rec.*, Nov. 5, 1921) he traces the history of the distribution of this much-dreaded disease and points out that our country has been, before war times, comparatively free from it.

He claims that its great occurrence is an aftermath of the war and points out that the shaving brush manufactured under careless conditions is the guilty agent.

He urges that prompt action be taken by public-health authorities for safe-guarding the public from this disease, instituting a campaign of education and warning against anthrax and for keeping a vigilant eye over the manufacture of shaving brushes. He reports one case which ran a fatal course within one week.

We suggest that physicians should caution their patients never to use a new shaving brush without letting it soak, for twenty-four hours, in a strong chlorazene solution.

SHAVING-BRUSH INFECTIONS WITH ANTHRAX

Several years ago, a not inconsiderable number of accidental infections with anthrax was reported in which the infection had been traced to shaving brushes supposed to have come from Japan or China. *The Lancet* for December 25, 1920, (p. 1304), reports a case of this kind which occurred as late as in May, 1920, when it might have been supposed that all the contaminated shaving brushes had been located and eliminated. The report is as follows:

E. C., aged 40, bought a new shaving brush at Coventry, on April 10, 1920. He used the brush from the date of purchase. He was admitted to Mount Vernon Hospital for Consumption on the 12th. On the 29th, he cut his face and immediately relathered with the brush. On May 1, he complained of a small painful sore on his chin. Doctor Jones, the house surgeon, asked Dr. W. G. Kinton, the superintendent, to have a look at it on account of its curious appearance. Doctor Kinton at once suspected anthrax, and to him is due the credit of immediate diagnosis. The exudate was examined and found to contain large rod-shaped bacilli.

"I was then telephoned to come out and operate at once. I found the man with a small sore on the left side of the chin; the center was black, and it was surrounded by a purple red area, in which two small vesicles were beginning to form. The glands in the submaxillary space were enlarged. The temperature and pulse were not altered, and the man did not appear to be ill. He was given an anesthetic, and the sore was completely removed with a margin of about half an inch of good tissue. The wound was sewn up and healed by first intention. The man made an excellent recovery, the glands subsiding in a few days. The tissue was sent to the pathologist, who reported that it contained anthrax bacilli.

The medical officer of health, at Coventry, was communicated with and the name of the shop given at which the brush was bought. The brushes in that batch were examined; and anthrax bacilli were found in several of them; these were destroyed.

INJECTION OF MOTHER'S MILK FOR INSUFFICIENT LACTATION

Abderhalden's teachings, that the injection of organic substances provokes a reaction on the part of the organ from which they are derived, were demonstrated to be true in the following experiment.

Dr. Carl Myer reports (*Ztrlbl. f. Gyne.* No. 23, 1920) twenty cases of insufficient lactation in which injections of mother's milk were given. Sixty-one and five-tenths percent, or 16 cases, reacted favorably and a decided increase in the amount of milk secreted was noticed. The mothers said that they could feel a marked filling of the breast or that the milk began to trickle out.

The technic of injecting mother's milk is so simple and the material is so easy to obtain that it is advisable in all cases of threatening insufficiency of lactation to make use of Dr. Myer's suggestion.

No ill effects ever followed the injections.

TWO UNUSUAL CASES OF ABDOMINAL TUBERCULOSIS

The two following cases reported in the *British Medical Journal* (May 14, 1921, page 703) appear to be sufficiently unusual to be worth recording, partly on account of the difficulties in diagnosis and partly on account of the apparent rarity of mesenteric abscess at the ages at which it occurred in these two patients. The article in question was con-

tributed by Mr. E. G. Hesinger, Assistant Surgeon to Grey's Hospital, London.

Case 1.—H. P., a male infant, aged 5 months, had been noticed to appear ill for ten days. Diarrhea was present during the whole of this period, the stools being greenish and offensive, but not containing any blood. The child had been taking its food badly and had vomited four times before it was brought to the hospital, where it was at once admitted.

On admission, he looked extremely ill. He was pale, with sunken face, and restless. The abdomen was very greatly distended, appeared to be tender, was resonant in the middle and dull in the flanks. The child vomited once in the ward, but the vomit was in no way characteristic. Pulse very feeble, 150 to 160, temperature, 102°. The abdomen was too tensely distended for anything to be palpated. and the most probable diagnosis seemed to be pneumococcal peritonitis.

Laparotomy was performed under a spinal anesthetic. On opening the abdomen, a large quantity of purulent fluid and intestinal contents escaped, and a loop of intestine, showing a perforation, presented. The bowel wall in the neighborhood and over most of the coil was edematous and obviously ulcerated. The perforation was closed and was reinforced with an omental graft, owing to the difficulty of making the sutures hold satisfactorily. It was noticed that the greater part of the pus came from a mass which could be felt in the abdomen, and this, on further exploration, proved to be a mesenteric abscess, from which several ounces of pus were evacuated. A tube was left, draining the abscess cavity, and Carrel instillation of the peritoneal cavity with saline was instituted. The child appeared to rally at first, but died the following morning.

Postmortem examination showed extensive tuberculous ulceration of the small intestine; one of the ulcers had perforated, and the cavity of the mesenteric abscess was in relation to a ruptured tuberculous caseating gland.

Case 2—F. J., a male, aged 34, gave a history of pain in the left iliac fossa for three weeks, the pain being also referred to both lumbar regions. It was not influenced by food or exercise, but was a good deal worse at night. The patient had been extremely constipated, but had never vomited. He was admitted to the hospital as a case of subacute intestinal obstruction. There was some abdominal distention, with tenderness over the left iliac fossa; a tumor of somewhat vague contour, but of firm consistence, could be palpated in this region; manipulation was painful. The tongue was furred and dry, and an enema failed to act. Temperature, 99.4°, pulse, 100. The tumor felt like an abscess walled in by bowel; but, as auscultation and palpation revealed the cecum in the normal position and apparently not connected with the tumour, a tentative diagnosis of an abscess in connexion with a Meckel's diverticulum was made. Diverticulitis was considered, but seemed unlikely on account of the mobility of the tumor.

Laparotomy was performed and the tumor explored. The appendix was attached by its tip to the tumor; it was somewhat inflamed secondarily, and consequently removed.

A well-formed Meckel's diverticulum was separated from the loops of bowel bounding the mass, but was seen to be normal apart from some injection. The mesentery of the small intestine was noted to be very thick and short, the bowel being bound down almost to the posterior abdominal wall. On separating the loops, about a pint of faecal-smelling pus was evacuated. On exploring the cavity, it was found to be bounded by mesentery and bowel, and from one wall half of a semi-calcareous gland was removed. In spite of the feculent odor of the pus, cultures remained sterile on incubation. The abscess cavity was drained, and the patient made an uninterrupted recovery, the tract of the drain healing quickly.

REMOVAL OF A TWENTY-PENNY WIRE NAIL FROM THE BLADDER

Dr. H. W. E. Walther reports, in the *New Orleans Medical and Surgical Journal*, of September, 1921, an unusual case of foreign body in the bladder.

A colored male, age twenty-eight, was admitted to Dr. Walther's service in the New Orleans Charity Hospital, with the complaint of bladder trouble.

X-ray revealed a nail shadow in the bladder region.

A suprapubic cystotomy was performed and the nail, 4½ inches in length, was found encased by a calculus; the point being imbedded in the prostatic tissue, preventing its rupturing the bladder.

The question arises, how did the nail get into the bladder? As a plausible explanation may be offered the fact that it was introduced by the patient per urethram for the purpose of masturbation, while he was confined to an insane asylum.

Among the Books

BAILEY: "FOOD PRODUCTS"

Food Products. Their Source, Chemistry, and Use. By E. H. S. Bailey, Ph.G. Second Revised Edition. Illustrated. Philadelphia: P. Blakiston's Son and Co. 1921.

This volume is an attempt to bring together in usable form the more important facts concerning that which we eat and drink. They are collected from a multitude of books, pamphlets and scientific reports, which are not conveniently accessible to the general public. The information and recommendations given are strictly scientific, that is to say, they are not tinged with faddism, which is the defect of so many published works on this subject. The author aptly says: "It is only by knowing what good, wholesome food is, its composition and appearance, that we can hope for an improvement in the general food supply. When this knowledge is widely disseminated, public opinion will go far toward correcting any abuses that still exist in the food market; for, pure food laws are but the crystallized sentiment of the united protest of the people against unwholesome and fraudulent products.

The book is well written and readable—valuable to the physician in his capacity of adviser to his patients, and valuable to the general consumer for his own guidance.

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STOPES: "RADIANT MOTHERHOOD"

Radiant Motherhood. A Book for Those Who Are Creating the Future. By Marie Carmichael Stopes. New York: G. P. Putnam's Sons. 1921.

The matters discussed in this volume are of great importance to the world in their bearing on the present happiness of the married, as well as on the future improvement, mental and physical, of the human race. There are certain phases of the subject of motherhood that are of such an intimate and personal nature that they are not generally discussed openly. On subjects of that nature, we have in the past had too much assertion and too little proof. In this field, theorists and dogmatists run riot, and reformers of the "crank" variety are in their element. The result has been that most books of this kind are little more than collections of eccentric theories, stated with a degree of positiveness that is discouraging to the real seeker after truth. It is, therefore, refreshing to meet with an occasional writer whose object appears to be, not to maintain a theory or air an opinion but to get at the facts, to draw from them fair and reasonable conclusions, and lastly (and this takes courage) to state fearlessly those conclusions, knowing that they will meet with denunciation and ridicule from the narrow-minded.

The spirit in which this book is written, and its calm judicial attitude, commend themselves to the reader who is more interested in truth than in sensation. It furnishes food for thought, and married couples at the beginning of their conjugal life wou'd find it helpful; not that it solves all their problems but because its suggestions tend towards a solution. It is worthy of a large circulation.

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ROBINSON: "MARRIED LIFE"

Married Life and Happiness or Love and Comfort in Marriage. By William J. Robinson, Ph.G., M.D. New York: Critic and Guide Company. 1922.

This is a frank discussion of the elements of conjugal happiness from the standpoint of both, sexual and psychological, relations. There is a wide divergence of opinion, not only among physicians but among the laity as well, as to the wisdom of the free discussion of the most sacred relations of human life. The coarse animalism of some husbands, and the erratic and erotic emotionalism of some wives, are, of course, incompatible with a happy married life, and no one knows this more emphatically than the family physician; but, the trouble is that the individuals who need the warnings of such a book are the very ones least likely to see it, and if they did, they would treat its teachings with contempt and ridicule. Many persons take the attitude that the giving of advice on such a subject is a thankless and useless task. It certainly is often both. Still, the author says: "Nevertheless, the giving of advice is not always a wasted effort. For, there are borderline people who are eager to listen to advice and eager

to follow it. Many people's lives have been changed for the better by a piece of good, sensible advice. Some actually did turn a new leaf and became different persons."

There is one point that we can emphasize, namely, that this book is written by a scientific physician. Many, indeed, most books on sex subjects are written by faddists—antidrug faddists, diet faddists, quacks and irregulars of every sort. They use the sex question for its power to excite curiosity and sell the book, and then proceed to poison the reader's mind with their unscientific falsehoods and attacks upon scientific medicine. Any doctor who wishes to put this book into his patient's hands can do so with the certainty that it will not poison their minds with falsehoods.

BELL: "WOMAN FROM BONDAGE TO FREEDOM"

Woman from Bondage to Freedom. By Ralcy Husted Bell. New York: The Critic and Guide Company. 1921.

We have here the discussion of a subject on which there are wide and often bitter differences of opinion. We have seldom seen a better and more readable description of the development of primitive man (and woman). True, it is partly an imaginative picture, but it is scientific imagination based upon the discoveries of recent years, and especially of the last decade. The relics of prehistoric man, both material and artistic, found in the caves, river gravels, lake dwellings, and kitchen middens of the people of a hundred-thousand years ago, have turned a flood of light upon one of the most interesting subjects in the world; namely, the long road of human development from beast to civilized man.

The author traces the position of woman through all these long centuries in a manner most interesting as well as historically correct. It is when she comes to today's chapter in the social evolution of woman that she will find her work received with differences of opinion. The book is well worth reading, even by those who do not agree with its conclusions.

We have no harsh criticism to make of it, but we would remind social reformers that, if they wish to carry with them the great mass of moderate and thoughtful people, they will do well to remember the warning of Theodore Roosevelt about the "lunatic fringe" that always attaches itself to the skirts of every reform, however good it may be. The author does not help her cause by classifying, along with Jesus Christ, Abraham Lincoln, Wendell Phillips and other universally honored benefactors of the race, a man who has served a term in prison for teachings and for acts that tended to destroy our armies in the field, and hamper and cripple the forces of our Allies in their efforts to prevent the destruction of civilization. We have heard much of this man's kindliness and love for his fellows, but his philosophy is so biased and illogical that, to carry it out, would be to destroy the institution that has done more to ameliorate the lot of the working classes than any other single influence, that is, the much maligned Capital.

DAVIS: EYE, EAR, ETC.

Eye, Ear, Nose, and Throat Nursing. By A. Edward Davis, A. M., M. D., and Beaman Douglass, M. D. Second Revised Edition. Illustrated. Philadelphia: F. A. Davis Company. 1920.

A very complete textbook for nurses and students, and of no small value to surgeons who specialize along this line, for even a good nurse, lacking special knowledge, may undo all that the surgeon has done. The instructions are detailed and thorough without being verbose, and their value is greatly enhanced by the outline of the anatomy of the subject which is given at the beginning of each section.

FULLER: "SCIENCE OF OURSELVES"

The Science of Ourselves. (A Sequel to the "Descent of Man.") By Sir Bampfylde Fuller. London: Oxford University Press. 1921.

Each great university draws about itself a group of the best minds of the time. Especially is this true of an ancient and world famous institution such as Oxford. The Oxford University Press has been issuing scientific works of unusual value and importance. But, these books are sold at war-time prices. It would be very desirable if a different course could be pursued, similar to that followed by some of our American universities, of putting their publications at a price that favors their general circulation.

In this book, we have a scholarly discussion of the evolution and nature of mind. The key idea is, that mind is a psychological evolution, based upon the physical evolution of the brain and nervous system. This conception, simple and logical as it is, will come with something of a shock to those devout minds who regard the human soul, as they prefer to call it, as a finished product, miraculously bestowed upon the race by a personal Creator. Those minds

regard as degrading the thought that the human mind has developed from the mentality of ape-like forms of animal life. It is needless to say that, in reality, the idea, that the wonderful capacities of the human mind have been formed by a gradual development, is a grander and more sublime thought than that which sees them as suddenly bestowed upon a body suddenly and miraculously built from dust.

The book is divided into two parts. Part I treats of Nervous Activity, and Part II of Motives and Behavior. The subtitle is suggestive of the mode of treatment of the subject.

HEAD: "STUDIES IN NEUROLOGY"

Studies in Neurology. By Henry Head, M.D., F.R.S. In two volumes. Illustrated. London: Oxford University Press. 1920.

One of the main purposes of the review of a book is, to convey to the prospective purchaser an idea of its scope, and of the skill with which the author has treated his subject. With so highly specialized a work as the one under consideration, for the Reviewer to pass complete judgment would require highly specialized knowledge on his part. But, the Reviewer need not necessarily pass judgment upon the author's knowledge; that would be presumption. It is enough if he finds whether or not the author has made the subject understandable to the non-specialist mind. That the present author has done this, we have no hesitation in saying. The book is not only clear but intensely interesting.

The scope can be gathered from the statement that the work is mainly a republication of the following papers:

"The Afferent Nervous System from a New Aspect."

"The Consequences of Injury to the Peripheral Nerves in Man."

"A Human Experiment in Nerve Division."

"The Grouping of Afferent Impulses within the Spinal Cord."

"The Automatic Bladder, Excessive Sweating, etc., in Gross Injuries of the Spinal Cord."

"Sensory Disturbances from Cerebral Lesions."

"Sensation and the Cerebral Cortex."

KATZOFF: "TIMELY TRUTHS"

Timely Truths on Human Health. By Simon Louis Katzoff, Ph.D., M.D. Bridgeport, Conn.: Co-Operative Publishing Co., Inc. 1921.

Such a book gives one a shock. It seems incredible that, in this day and generation, any one with even an elementary conception of the meaning of science should utter a screed—such a jumble of a few self-evident but not pertinent facts, with a vicious attack upon nearly every great achievement of medical and surgical science in the last hundred years. How can any fair-minded man so utterly and completely ignore all evidence that does not suit him? Anyone who calls the scientific practice of medicine "the allopathic school" still has to learn the meaning of the word "school"; quite aside from the fact that the word "allopathic" is, in itself, opprobrious. A science founded on observation and experience is *fundamentally* different from the various "pathies" or "schools." They are confessedly based, each one, on a different theory. According to this book, germs do not cause disease; vaccination does not prevent smallpox and causes more deaths than that disease; to inject a serum to control an infectious disease is, to put "poison" and "filth" into the system; antitoxin in diphtheria is all wrong. We must not remove a diseased appendix, tonsil, adenoid or pile. Vivisection does not give us the knowledge which enables us to control infectious disease and save millions of lives. The author ridicules the Wassermann test for syphilis, and the use of mercury or arsenic in its treatment. He would treat it by drinking distilled water, and other equally powerful hygienic remedies.

It is to laugh! or it would be if the matter were not so serious. Such theorists are not impressed by evidence; they calmly ignore it. If they don't want to believe it, that settles the matter. Most fair-minded people think that, when evidence is overwhelming, it becomes our duty to accept it unless we can disprove it.

This book would be capable of enormous harm, were it not that the majority of people use their common sense. The one sad feature of the matter is, that innocent children are often sacrificed when their parents become obsessed with the teachings of those blind guides who are anti-everything.

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[The foregoing review was written by one of our editorial colleagues who has to his credit many years of active practice, of teaching, and of writing. His reaction to the perusal of Doctor Katzoff's book was, as will be seen, one of pained surprise and indignation. The various twisted and revolutionary ideas promulgated by the author overshadowed, in this Reviewer's mind, the good things that also are to be found in the 389 pages of text. We have attempted to do justice to those por-

tions of the book that merit commendation in an article that will be found on page 167 of this issue of CLINICAL MEDICINE. Nevertheless, we also have made use of our right to voice our objections and criticisms.—ED.]

"THE OXFORD MEDICINE"

The Oxford Medicine. By Various Authors. Edited by Henry A. Christian, A.M., M.D., and Sir James Mackenzie, M.D., F.R.C.P., etc. In six volumes. Illustrated. Volume V. Infectious Diseases (Cont'd) and Diseases Due to Animal Parasites. Volume VI. Diseases of the Central Nervous System. Oxford University Press. New York. 1921.

The fifth volume of this splendid "system" continues the treatises on infectious diseases contained in the preceding (fourth) volume and also contains chapters on diseases due to animal parasites. There are forty chapters, each one devoted to an infectious or a parasitic disease, from septic sore throat, acute rheumatic fever, meningococcus infections, and so forth down to sprue, yaws, yellow fever, malaria, amebiasis, and so forth.

The individual chapters are complete and splendidly written. It naturally was impossible for the Reviewer to read the book in its entirety. Still, what he has read proved to be remarkably well done, highly instructive and helpful.

The sixth volume of "The Oxford Medicine" is devoted to a consideration of diseases of the nervous central system. In addition, it contains chapters on the vegetative nervous system; epilepsy; migraine; choreas; hysteria; neurasthenia and various other nervous, mental and physical disturbances.

In the introduction of the chapter on the vegetative nervous system, we read: "One of the most significant signs of the progress of modern medicine is the increasing energy which is being devoted to the investigation of those diseases and conditions which are characterized by disturbance of function rather than by evidence of gross organic disease. . . . During the past fifteen years, disturbances of function have been specially investigated from three points of view, the biochemical, the neurological and the psychological. Perhaps one of the happiest results is that workers are being forced to look at the problem not only from their special standpoint but also from that of others." These remarks are entirely in accordance with the introductory discussion in Volume I (this journal, June, 1921, p. 418), by Dr. Henry A. Christian, to which we called attention on an earlier occasion.

The chapter on the vegetative nervous system is immensely interesting and contains in brief what is known in regard to this important subject.

For personal reasons, the Reviewer is especially interested in the chapter on epilepsy, which really is very excellent, although we differ somewhat with the author's views as to drug treatment.

In the discussion of the relations between epilepsy and alcohol, we miss reference to the fact, or what we believe to be a fact (from our observations), that epilepsy may be the expression of an inherited taint because of parental alcoholism. That is to say, we have repeatedly found, on close questioning, that epileptic children were conceived while one or the other of the parents was intoxicated, or if one or the other of the parents was a confirmed alcoholic.

With regard to treatment, we do not agree at all with the author's support of bromide treatment. We are fully aware of the fact that it is looked upon as the essential treatment. Yet, it offends so seriously against the primary law of *nil nocere* and it is so certainly possible to replace bromides by more efficient and usually less harmful substances (such as barbital and luminal) that we can not conceive how anybody can be willing to adhere to the habitual administration of bromides, considering the serious and deleterious effects that this treatment exerts upon its victims.

The sixth volume of "The Oxford Medicine" is a worthy companion to its predecessors. The whole work is one the purchase of which can be urged cordially upon general practitioners and even upon those physicians whose means for the purchase of books are very limited. The investment is decidedly a paying one; the information contained in these volumes is fully up to date, and it is provided by men who stand high in their particular branches of medical endeavor.

A BOOK, to be of service, should either contain some new truths or old truths expressed better than they had been told before. But, it must be based on truth.